PRODUCTS CATALOG

IT&IT PRODUCTS
Industrial Technology/Information Technology

ver. 11 + Annex
2008-2009

New Products Lineup

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CONTEC
www.contec.com

news box

The latest product information!

Two New Models - Core Duo / Core 2 Duo SBCs (945GME Chipset)

PICMG1.3-compliant Half Size

CPU: Option | Chip Set: 945GME | Main Memory: Max. 4GB DDR2 SDRAM

PICMG 1.3 | SATA | USB 2.0 | CF (Option) | Analog RGB | Giga LAN | Audio

GEH-9450-LAS

- Interfaces Include: Analog RGB, LVDS, SDVO, USB2.0 × 4, SATA × 4, Audio, IDE, Serial, PS/2, GigaLAN
- Supports 4GB (3.1GB available) DDR2 SDRAM
- PICMG1.3-compliant Backplane [BEH-0611] is available

30

PCI-compliant Half Size

CPU: Option | Chip Set: 945GME | Main Memory: Max. 4GB DDR2 SDRAM

PCI Half | SATA | USB 2.0 | CF (Option) | Analog RGB | Giga LAN | Audio

GPC-9450-LAS

- Interfaces Include: Analog RGB, LVDS, SDVO, USB2.0 × 6, SATA × 2, Audio, IDE, FDD, Serial, Parallel, PS/2, GigaLAN
- Supports 4GB (3.1GB available) DDR2 SDRAM

25

Panel-mount, Analog RGB, AC Power — GFPD-21 Series Flat Panel Displays

Compact, Slim-design Flat Panel Displays
Analog RGB input

10.4inch TFT | 12.1inch TFT | 15inch TFT | Analog RGB | Touch Panel | IP65

- 3 sizes: 15/12.1/10.4 inch
- General-purpose Analog RGB input
- RS-232C or USB Touch Panel connection
- Compatible with IPC-DT/x61 series on panel-cut size and external dimensions
- IP65-compliant dustproof/waterproof front panel

21

New Dual LAN Pentium 4 / Celeron / Celeron D SBC (845GV chipset) released

PICMG 1.0-compliant Full Size

GPI-8452-LLVA

- Intel Pentium 4 1.7G~2.8GHz (FSB400/533MHz), Celeron 1.7G~2.6GHz (FSB400MHz), Celeron® D 2.26G~2.8GHz (FSB533MHz)
- Interfaces Include: EIDE, USB2.0 × 6, Audio, Serial, Parallel, PS/2, Dual 100BASE-TX

24

New Measurement and Control Products

Analog I/O

10MSPS high-speed, 4ch simultaneous-sampling

PCI -compliant
10MSPS 12-bit Analog Input Board

Analog Input 4ch | Digital I/O 4/4

AI-1204Z-PCI NEW

37

PCI Express -compliant, Bus-isolated, High-precision / Multi-channel, High-precision

[Bus-isolated, High-precision]

Isolated 16-bit Analog I/O Board
AIO-160802LI-PE NEW

32

Isolated 16-bit Analog Input Board
AI-1616LI-PE NEW

32

AI-1616LI-PE

Isolated 16-bit Analog Output Board
AO-1604LI-PE NEW

33

[Multi-channel, High-precision Input]

100KSPS 16-bit Analog Input Board (Low Profile)
AI-1664LA-LPE NEW

32

AI-1664LA-LPE

[Multi-channel, High-precision Output]

100KSPS 16-bit Analog Output Board (Low Profile)

AO-1608L-LPE NEW

33

AO-1616L-LPE NEW

33

AO-1616L-LPE

Serial Communication boards for PCI Express

Full line up of Multi-channel / Isolated Serial Communication boards

PCI-compliant products are also available. Connector pin assignments and functions are compatible with the PCI Express compliant boards

RS-232C Communication Boards

2ch
GCOM-2C-PE NEW

48

4ch
GCOM-4C-PE NEW

48

8ch
GCOM-8C-PE NEW

48

Isolated RS-232C Communication Boards

2ch
GCOM-2PC-PE NEW

49

4ch
GCOM-4PC-PE NEW
(4 x Dsub 9pin cable bundled)

49

Isolated RS-422A/485 Communication Boards

2ch
GCOM-2PD-PE NEW

49

4ch
GCOM-4PD-PE NEW
(4 x Dsub 9pin cable bundled)

49

GCOM-8C-PE

GCOM-2PC-PE

GCOM-2PD-PE

news box

Digital I/O

PCI Express -compliant Isolated, High-voltage/ Reed Relay type

[Reed Relay type]

Independent Common, Reed Relay Output Board

Output 16

RRY-16C-PE NEW

40

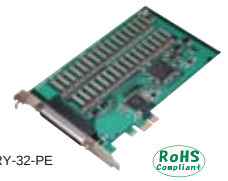
RRY-16C-PE

Reed Relay Output Board

Output 32

RRY-32-PE NEW

40



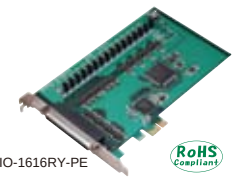
RRY-32-PE

High-voltage, Non-polar, Opto-isolated Digital I/O Board

Input 16 Output 16

DIO-1616RY-PE NEW

39



DIO-1616RY-PE

PCI Express-compliant, TTL-level, Multi-channel Digital Input / Output Boards

PCI-compliant products are also available. Connector pin assignments and functions are compatible with the PCI Express compliant boards.

	32-channel series	64-channel series	128-channel series
Digital Input Board	Input 32 **GDI-32T-PE**	Input 64 **GDI-64T-PE**	Input 128 **GDI-128T-PE**
Digital Output Board	Output 32 **GDO-32T-PE**	Output 64 **GDO-64T-PE**	Output 128 **GDO-128T-PE**

GDI-32T-PE

PCI Express-compliant, TTL-level Bi-directional Boards

PCI-compliant products are also available. Connector pin assignments and functions are compatible with the PCI Express compliant boards.

Bi-directional Digital I/O Board

Bi-direct 48 **GDIO-48D-PE**

Bi-direct 96 Low Profile **GDIO-96D-LPE**

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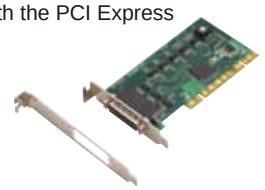


Motion Control

Low-cost, PCI Express-compliant Controller - High-speed line driver output, Linear Interpolation functions

Can be used in a variety of applications including semiconductor equipment, test instruments, multi-axis robots and X-Y robots. Provides PC-based control for stepping or pulse-train input servomotors.

8-axis type PCI Express -compliant High-speed Line Driver Output Motion Control Board

GSMC-8DL-PE NEW

54

4-axis type PCI Express -compliant High-speed Line Driver Output Motion Control Board

GSMC-4DL-PE NEW

54

Active X Component

for Development of Measurement Systems

All-in-one Package

for Displaying, Controlling, Accumulating and Analyzing

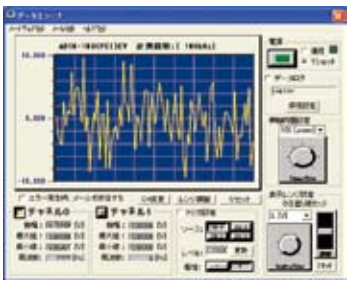
ACX-PAC(W32) Ver.5.0 New Version

Compatible with over 200 of CONTEC's DAC products!

Software currently requires Japanese development environment

ACX-PAC(W32) Ver.5.0 NEW

ACX-PAC(W32) is a measurement system development tool that supports 200 models of CONTEC's measurement and control interface products.This software package includes Graphic Display, Analysis/Calculation and File Operations.



Short development time

Benefits of ACX-PAC(W32) - CONTEC's Active X Development Software

1. This software allows the end-user to develop a high performance, graphic measurement system using only the included components and simple script descriptions. By installing only necessary functions, an application specific system can be developed in a short time.

2. The development software includes both display components (such as graphs and switches) and device control components allowing CONTEC's devices to be easily controlled. The property page consolidates complicated settings that are included in programs enabling various measurements to be prepared quickly.

3. ACX-PAC(W32) includes a large collection of sample programs which can be easily customized with the included source code.

This version is a recent upgrade to CONTEC's ACX-PAC(W32) - ActiveX component

Added Features

- **Motion Control Support**
  Provides support for CONTEC's motion control boards - able to execute JOB, PTP and Bank motions. It can also control events such as setting Beeline acceleration / deceleration and completion of motor motion.
- **Support Bus Master transfer fucntion of Analog, Digital, Counter Boards**
- **Add the Timing Chart component**
- **Upgrade the Display component function**
  The screen design background can be made transparent.
- **Support the newest devices**
  Supports PCI Express, PCI and USB.

Expansion Unit & Bus Adapter

PCI or PCI Express slot can be added to the PCI Express / Express Card slot of PC

PCI Express Cable type
PCI Express Bus Expansion Chasis

2 Slot | Short Size

GECH-PE-CE-H2B NEW

RoHS Compliant

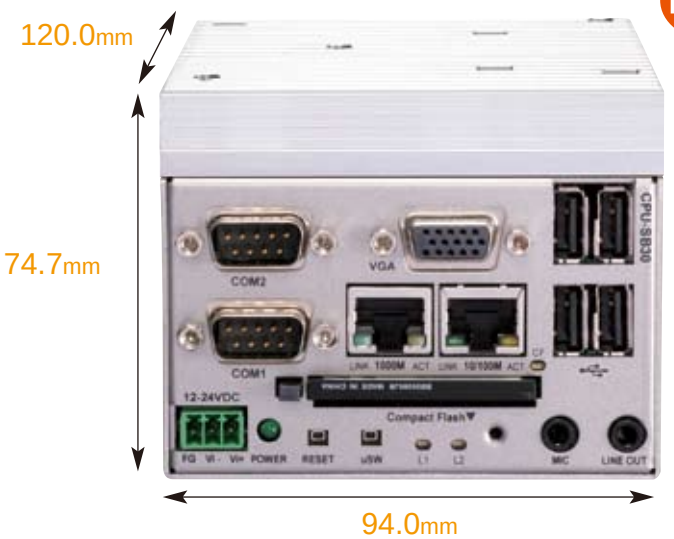
- Two short size, PCI Express-compliant boards can be installed
- Adds PCI Express-compliant slots to the host PC
- Expansion chassis power can be turned on & off with the host PC power supply

BOX-PCs®

Ultra-compact, general-purpose PC. Supports Windows®, PC DOS 2000 and Linux

SB 30 Series

NEW



Fanless, Ultra Low Voltage Celeron® M 800MHz Micro Controller Unit

Ultra LowVoltage Celeron M 800MHz | Chip Set 852GM | Main Memory 512MB DDR SDRAM | FAN-less | Analog RGB | Dual LAN | Audio

Please see page 13 for specifications
Dimensions on Page 13

Model	Storage	OS	Memory	
GCPU-SB303-FIT	No CF	–	512MB	[JP-model: CPU-SB303-FIT]
GCPU-SB303-FIT-3F	CF 2GB	Windows XP Embedded		[JP-model: CPU-SB303-FIT-3F]

*: Windows XP Embedded preinstall (Compact Flash) model includes recovery CD-ROM.

CD version user's manuals are included with the units. Optional CD-ROM / DVD-ROM drives are available.

SB30 Series Features

Palm size

Compact / Light weight
94.0(W) × 120.0(D) × 74.7(H)
Weight: 800g

High speed

6 times faster than CONTEC's CPU-SB20 Series micro-computers.
CPU: Intel® Celeron M 800MHz, Chip set: 852GM, Memory: 512MB

Interfaces & I/O Expansion

Interfaces include: USB2.0×4, RS-232C×2, LAN×2 (1000BASE-T, 10/100BASE-TX)
I/O Expansion: 24 types of F&eIT series I/O modules.

Multiple Operating Systems

Supports Windows® XP Pro / Windows® XP Embedded, Windows® 2000, Linux, PC-DOS 2000

Can function as a general-purpose PC or an F&eIT I/O module controller

Can be used as a general-purpose PC or an F&eIT module controller I/O modules include Digital / Analog I/O and Serial Communication for use in Measurement / Control applications.

Quiet and Highly Reliable

Fan-less operation, ULV CPU, unique heat sink and use of a CF for storage creates a quiet and highly reliable system. The unit ships with a metal fitting to secure the CF card against accidental disconnection.

Supports wide range of input voltage (12 - 24VDC)

The SB-30 Series supports a wide range of power supplies (12 - 24VDC). Power can even be supplied from the battery inside a mobile device.

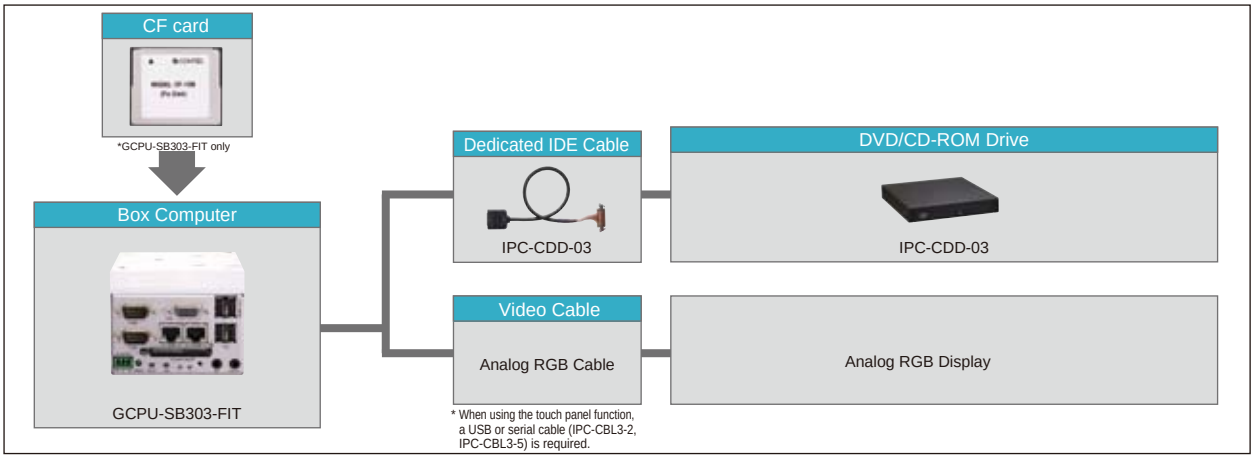
Unit can connect to a maximum of 8 F&eIT Series device modules

Can connect to a maximum of 8 F&eIT Series modules.
NOTE: The total maximum power consumption for all modules cannot exceed 3A.

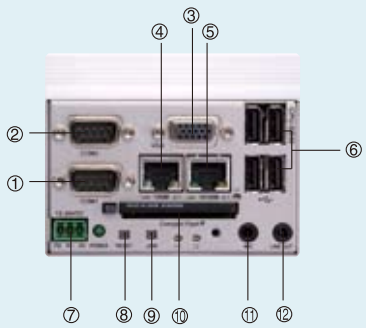
35mm DIN-rail mountable

Ships with a 35mm DIN-rail attachment that can be removed from the unit or used if the installation environment requires it.
Connection to device modules is through a stack connector located on the side of module. This design enables the end-user to build a clean and clutter-free control system.

■System Configuration



■Interfaces



① COM1
② COM2
③ Video output
④ 1000BASE-T
⑤ 10/100BASE-TX
⑥ USB2.0 port
⑦ DC power supply input
⑧ RESET
⑨ User Programable Switch
⑩ CF card slot
⑪ MIC
⑫ Line output
⑬ F&eIT I/F

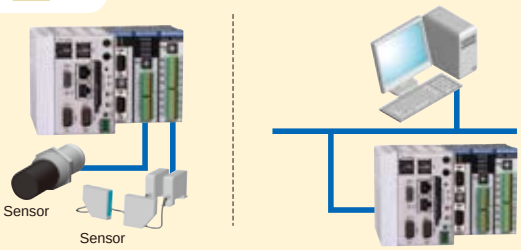
■Optional Accessories

Name	Description
CD Drive	
IPC-CDD-03	CD-ROM/DVD-ROM drive
IPC-CDC-03	CD-ROM cable (400mm)
CF	
GCF-1GB-A	CF 1GB (Industrial grade: -40 ~ 85°C)

Application Example 1

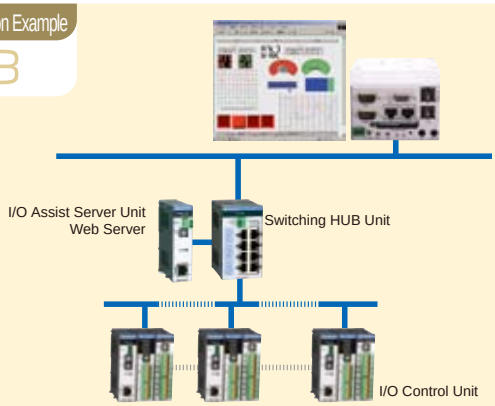
This unit can fit into spaces too small for standard PCs. In addition, using wireless LAN Micro Access Points allows you to embed this unit in mobile hardware or areas where wiring would be difficult.

Application Example 2



Used with F&eIT Series Device Modules, these can be used as compact controllers supporting a variety of I/O or as programmable ethernet-based remote I/O systems.

Application Example 3



CONTEC's micro controller can serve as a compact web monitoring terminal (client PC) when interconnected with device modules.

BOX-PCs®

Small Footprint / Fan-less / Two Low Profile PCI slots

Highly reliable in extreme environments

BX 840 Series

GPC-BX840P2-DC400

GPC-BX840P2-DC45F

IPC-BX840RP2-DC456

NEW

Ultra Low Voltage Celeron® M 800MHz Box-PC 840 series

Ultra Low Voltage Celeron M 800MHz | Chip Set 852GM | Main Memory 512MB DDR SDRAM | FAN-less | LVDS | Analog RGB | LAN | Audio

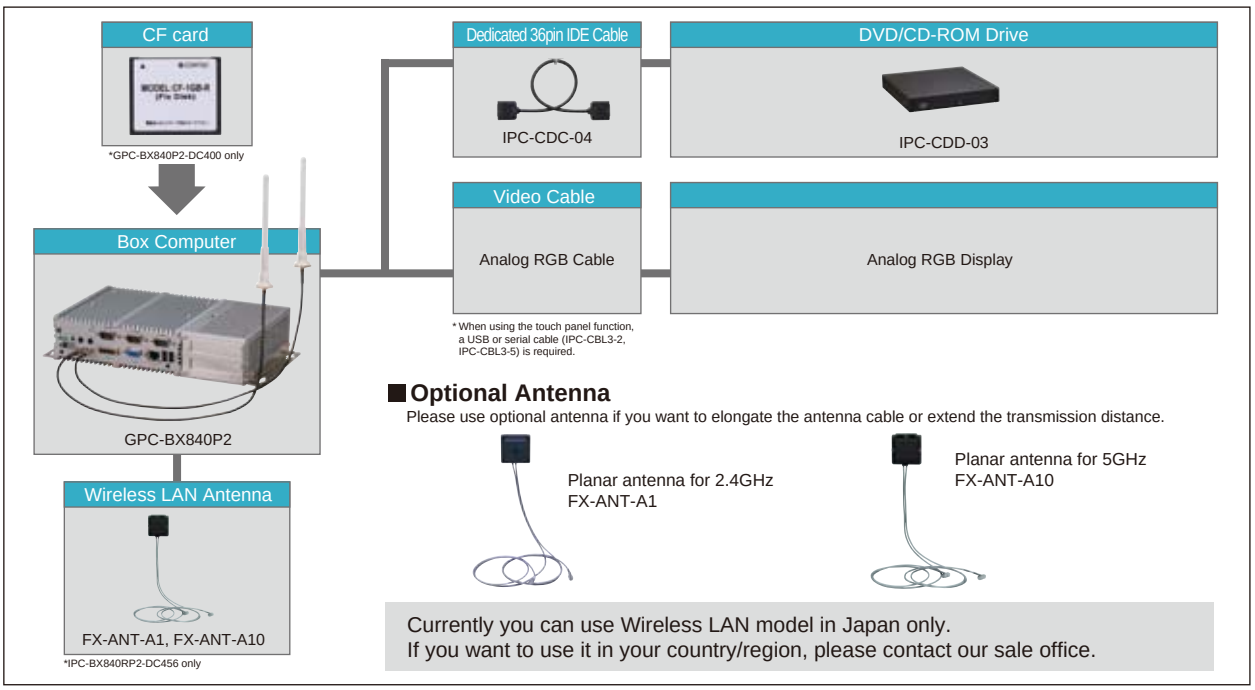
Please see page 14 for specifications
Dimensions on Page 14

Model	Storage	OS	Expansion Slots	Memory	
GPC-BX840P2-DC400	No CF	-	Low Profile	Standard 512MB	[JP-model: IPC-BX840P2-DC400]
GPC-BX840P2-DC45F	CF 2GB	Windows® XP Embedded			[JP-model: IPC-BX840P2-DC45F]
IPC-BX840RP2-DC456 * (Wireless LAN)	CF 2GB	Windows® XP Embedded (Japanese)			

*: Windows XP Embedded preinstall (Compact Flash) model includes recovery CD-ROM and driver & utility set CD-ROM [IPC-SLIB-01].

CD version user's manuals are included with the units. Optional CD-ROM / DVD-ROM drives are available.

■System Configuration



■Optional Antenna

Please use optional antenna if you want to elongate the antenna cable or extend the transmission distance.

Planar antenna for 2.4GHz
FX-ANT-A1

Planar antenna for 5GHz
FX-ANT-A10

Currently you can use Wireless LAN model in Japan only.
If you want to use it in your country/region, please contact our sale office.

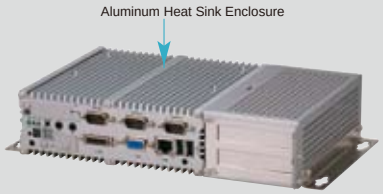
BX 840 Series Features

PCI Bus slot of Low Profile size

Two Low Profile [140mm (l) x 63.41mm (h)] PCI boards can be installed in the expansion slots.

Stable operation at +50°C

The system's radiant structure ensures a stable operation at +50°C.



5G vibration and 15G impact resistance

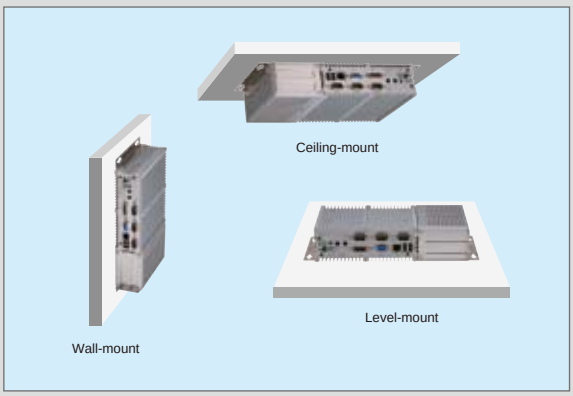
It's 5G vibration and 15G impact resistance allows for installation in a variety of environments.

Quiet and highly reliable

Fan-less design and the use of a CF card for storage creates a quiet and highly reliable system.

Various installation methods available

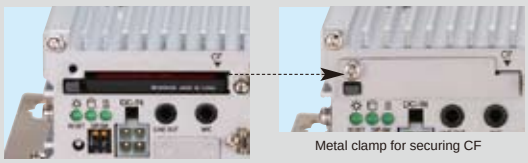
Since CF card and sealed structure free the products from inst tion limitations. They can be installed on a ceiling, wall or floor using the included metal mounting brackets.



Secure design

Includes installation locking clamps and a metal clamp for securing the CF card against accidental disconnections.

Example of installation locking clamps



Metal clamp for securing CF

Wireless LAN security

The IPC-BX800 series includes WSL, the original cryptographic code as well as WPA and WEP, making it ideal for business use. This system can also be used with CONTEC wireless LAN products to provide an enterprise-wide solution.

Fail-safe Automatic Shut Down

If there are power voltage or temperature problems, these systems automatically shut down according to the user's setting. CMOS data, retained in the EEPROM allows the system to start up even when the battery isn't functioning. Windows® XP Embedded EWF function allows the power to be switched off without shutting down the system.

* Only data in EWF function partitions can be saved.
* If the power is shut down when you are renewing the data is not effective for EWF, file systems are likely to be broken. Please note.

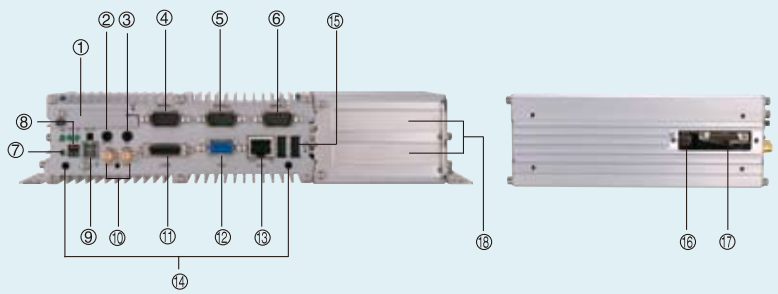
Wide range power supplies (12 - 24VDC)

The BX-840 Series support a wide range of power supplies (12 - 24VDC). Power can even be supplied from a battery inside a mobile device.

All interfaces are located at the front panel for ease of operation

The BX 840 Series feature a wide variety of interfaces, including two USB 2.0 ports, three RS-232C ports and 100BASE-TX LAN. They have both analog RGB and LVDS video interfaces to provide dual view capability.

■Interfaces



< Front >

< Left side >

Interfaces

① CF card slot
② Line out
③ Mic
④ COM 1
⑤ COM 2
⑥ COM 3
⑦ Reset
⑧ Mode Switch
⑨ DC power input
⑩ Wireless LAN antenna
⑪ LVDS port
⑫ Video output
⑬ LAN port
⑭ Cable clamp hole
⑮ USB2.0 ×2
⑯ Master/Slave setting of CF card
⑰ Primary IDE connector (36-pin)
⑱ Low Profile expansion slots ×2

* IPC-BX840RP2-456 only

■Optional Accessories

Name	Description
CD-ROM/DVD-ROM drive	
IPC-CDD-03 *1	CD-ROM/DVD-ROM drive
Cable	
IPC-CDC-04	IDE cable for IPC-CDD-03

Name	Description
CF card (only for GPC-BX840P2-DC400)	
GCF-1GB-A	CF 1GB (Industrial grade: -40 ~ 85°C)
GCF-2GB-A	CF 2GB (Industrial grade: -40 ~ 85°C)
GCF-4GB-A	CF 4GB (Industrial grade: -40 ~ 85°C)
GCF-8GB-A	CF 8GB (Industrial grade: -40 ~ 85°C)

Multiple Functions - Compact Design
Shoebox-size Embedded PC

GPC-BX701-AC5

GPC-BX701P2-AC5

GPC-BX701P4-AC5

BX 701 Series

Fanless, Ultra Low Voltage Celeron® M 1.0GHz Box-PC 701 series

Ultra Low Voltage Celeron M 1.0GHz | Chip Set 855GME | Main Memory Standard 1GB | FAN-less | Analog RGB | Dual LAN | Audio

Please see page 15 for specifications
Dimensions on Page 15

Preinstalled OS (Storage Device)	Expansion Slots	Model	
None	None	GPC-BX701-AC5	[JP-model: IPC-BX701-AC500]
	PCI/ISA ×2	GPC-BX701P2-AC5	[JP-model: IPC-BX701P2-AC500]
	PCI ×2, PCI/ISA ×2	GPC-BX701P4-AC5	[JP-model: IPC-BX701P4-AC500]
Windows® XP Professional (Hard Disk)	None	IPC-BX701-AC51G	
	PCI/ISA ×2	IPC-BX701P2-AC51G	
	PCI ×2, PCI/ISA ×2	IPC-BX701P4-AC51G	
Windows® XP Embedded (Silicon Disk)	None	IPC-BX701-AC52F	
	PCI/ISA ×2	IPC-BX701P2-AC52F	
	PCI ×2, PCI/ISA ×2	IPC-BX701P4-AC52F	

Windows XP preinstalled models include recovery CD-ROM and driver & utility set CD-ROM[IPC-SLIB-01].

◎Method of power off without shundown

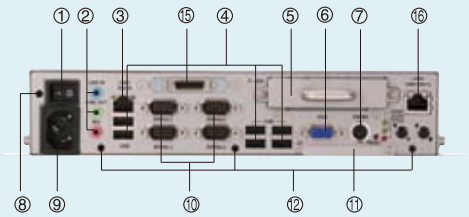
Windows® XP Embedded + Silicon Disk enables EWF function (set by Command Prompt of OS) EWF (Enhanced Write Filter) is a function specific to Windows® XP Embedded that protects the disk from being written on by redirecting the writing to RAM.

BX 701 Series Features

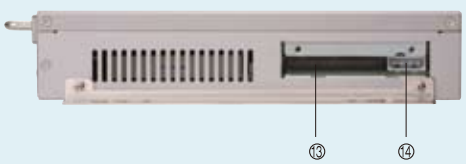
- Low Voltage Intel® Celeron® Processor 1.0GHz (FSB 400MHz) CPU and 1GB memory
- Naturally air-cooled fan-less system
- Reliable, virtually noiseless operation when used with CONTEC's PC-ESD Series silicon disk drives
- Embedded CPUs and chipsets contribute to long-life availability
- CONTEC customized BIOS [Phoenix Technologies, Ltd.] provides BIOS level support
- Interfaces include CF card (Type I, bootable), Audio (AC97 compliant), 100BASE-TX and Serial (RS-232C) ×4, USB2.0×6
- External secondary-IDE connector for optional CD-ROM
- CMOS data can be stored on EEPROM, providing system boot-up even if the battery is drained
- All the interfaces are on the front panel, and adopt the Slot-in method that can mount/dismount storage disk easily.
- Dependable connections such as a hold-down clamp for AC power cable and a metal fitting to secure the CF
- Compatible with previous Box-PCs [IPC-BX 630/620/600 series]

■Interfaces

- Front -



- Right side -



Interfaces

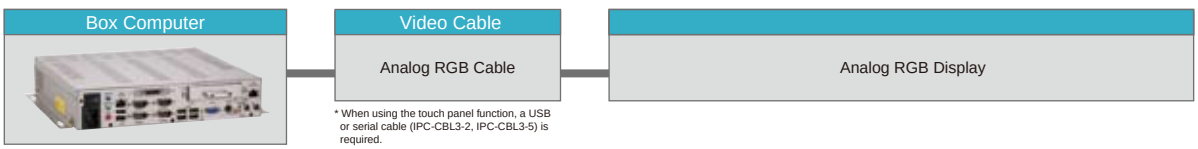
① Power switch
② Line in
Line out
Mic
③ LAN port
④ USB2.0 ×6
⑤ Slot-in / Storage bay
[Primary IDE Master]
⑥ Vedio output
⑦ PS/2 Keyboard & Mouse
(Distribution cable included)
⑧ AC power clamp hole
⑨ AC inlet
⑩ RS-232C ×4
⑪ CF card
[Secondary IDE Slave]
・Type I memory card
・OS boot
・Metal fittings
⑫ Cable clamp hole
⑬ 40-pin IDE
(IDE cable included)
[Secondary IDE Master]
⑭ IDE device power
(Power cable included)
⑮ LVDS port
⑯ LAN port (1000BASE-T)

Easy Installation

Opional IDE 5-inch bay-mount DVD/CD-ROM drive can be connected.

* Other devices cannot be connected, such as a Hard disk.

■System Configuration



* When using the touch panel function, a USB or serial cable (IPC-CBL3-2, IPC-CBL3-5) is required.

■Optional Accessories

Name	Description
CF card (Fixed Disk Mode)	
GCF-1GB-A	CF 1GB (Industrial grade: -40 ~ 85°C)
GCF-2GB-A	CF 2GB (Industrial grade: -40 ~ 85°C)
GCF-4GB-A	CF 4GB (Industrial grade: -40 ~ 85°C)
GCF-8GB-A	CF 8GB (Industrial grade: -40 ~ 85°C)

PANEL-PCs

Multiple Functions
Four versions available

PT 700 Series

GPC-PT700LS-AC4

GPC-PT700LS-W2AC4

GPC-PT700HX-AC4

GPC-PT700HX-W2AC4

NEW

Fanless, Ultra Low Voltage Celeron® M 1.0GHz Panel-PC 700 series

Ultra Low Voltage Celeron M 1.0GHz | Chip Set 855GME | Main Memory 512MB DDR SDRAM | FAN-less | Analog RGB | LAN | Audio | RoHS Compliant

Please see page 17 for specifications
Dimensions on Page 17

Model	Expasion Slot	Preinstalled OS (Storage)	LCD size	Description
GPC-PT700LS-AC4	None	None	12.1”	[JP-model: IPC-PT700LS-AC400]
GPC-PT700HX-AC4			15”	[JP-model: IPC-PT700HX-AC400]
IPC-PT700LS-AC41G		Windows® XP Professional (Hard Disk)	12.1”	
IPC-PT700HX-AC41G			15”	
IPC-PT700LS-AC42F		Windows® XP Embedded (Silicon Disk 1GB)	12.1”	
IPC-PT700HX-AC42F			15”	
GPC-PT700LS-W2AC4	2 × PCI/ISA	None	12.1”	[JP-model: IPC-PT700LS-W2AC400]
GPC-PT700HX-W2AC4			15”	[JP-model: IPC-PT700HX-W2AC400]
IPC-PT700LS-W2AC41G		Windows® XP Professional (Hard Disk)	12.1”	
IPC-PT700HX-W2AC41G			15”	
IPC-PT700LS-W2AC42F		Windows® XP Embedded (Silicon Disk 1GB)	12.1”	
IPC-PT700HX-W2AC42F			15”	

■Optional Accessories

Name	Description
PCI board type Silicon Disk Drive [for xPC-PT700xx-W2ACxxx]	
GPC-RSD1000-PCI	1GB
GPC-RSD2000-PCI	2GB
GPC-RSD4000-PCI	4GB
GPC-RSD8000-PCI	8GB

Name	Description
2.5” Silicon Disk Drive	
GPC-ESD1000-A	1GB (Supports UltraDMA)
GPC-ESD2000-A	2GB (Supports UltraDMA)
GPC-ESD4000-A	4GB (Supports UltraDMA)
GPC-ESD8000-A	8GB (Supports UltraDMA)

Name	Description
CF Card (Fixed Disk Mode)	
GCF-1GB-A	CF 1GB (Industrial grade: -40 ~ 85°C)
GCF-2GB-A	CF 2GB (Industrial grade: -40 ~ 85°C)
GCF-4GB-A	CF 4GB (Industrial grade: -40 ~ 85°C)
GCF-8GB-A	CF 8GB (Industrial grade: -40 ~ 85°C)

As shown on the side of product's images, RoHS compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

PT 700 Series Features

● Low Voltage Intel® Celeron M Processor 1.0GHz (FSB 400MHz) CPU, 855GME Chipset and 512MB memory
All systems feature Low Voltage Intel® Cerelon® M Processor 1.0GHz (FSB 400MHz), Intel® 855GME Chipset and 512MB memory. Embedded CPUs and chipsets contribute to long-life availability.

● Includes not only standard PC interfaces but also bootable CF card I/F
A wide variety of interfaces are located on the side of the main unit, including a CF card slot (Type I), Serial ports (RS-232C) ×4, USB 2.0 ×6, 100BASE-TX and AC97-compliant Audio. The same screenshot can be viewed away from the main unit by connecting a display to the Analog RGB interface. CONTEC's PT700 series features an externally accessible hard drive bay that allows access to the IDE drive without having to open the unit.

● Naturally air-cooled fan-less system
The low voltage CPU and natural air-cooled case structure enable a fan-less system.

● Secure tamperproof structure and function for backing up BIOS setting
Locking installation clamps and a metal fitting to secure the CF prevents unnecessary disconnections. CMOS data can be stored on EEPROM, allowing the system to boot-up even if the battery is drained.

● IP65-compliant dustproof / waterproof front panel
The front panel is a IP65-compliant structure that prevents system corrosion from dust and dripping water.

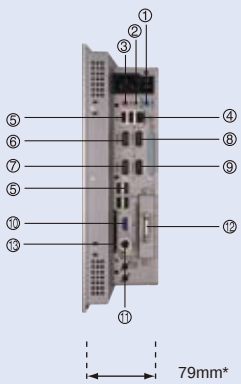
● Windows® XP Embedded preinstalled model features no mechanical moving parts
With a silicon disk drive as the storage device, this quiet and highly reliable system functions with no mechanical moving parts. This configuration provides a robust system that is better able to withstand environmental factors (temperature, humidity, vibration or shock).

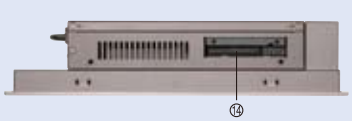
■ GPC-PT700HX-AC
[IPC-PT700HX-AC]
■ GPC-PT700HX-W2AC
[IPC-PT700HX-W2AC]

■ GPC-PT700LS-AC
[IPC-PT700LS-AC]
■ GPC-PT700LS-W2AC
[IPC-PT700LS-W2AC]

■ Interfaces

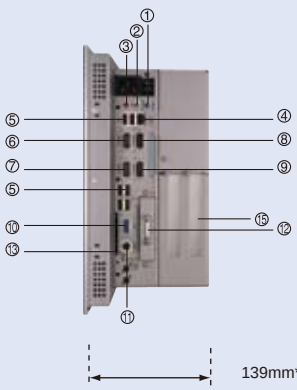
■ GPC-PT700LS-AC [IPC-PT700LS-AC]
■ GPC-PT700HX-AC [IPC-PT700HX-AC]

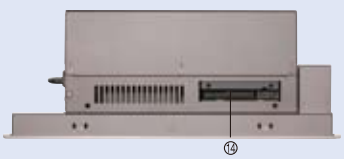




The figure is GPC-PT700HX-AC.
All are the same except the display.

■ GPC-PT700LS-W2AC [IPC-PT700LS-W2AC]
■ GPC-PT700HX-W2AC [IPC-PT700HX-W2AC]





The figure is GPC-PT700HX-W2AC.
All are the same except the display.

Interfaces

① Line in
② Line out
③ Mic
④ 100BASE-TX/10BASE-T
⑤ USB2.0 ×6
⑥ COM 1
⑦ COM 2
⑧ COM 3
⑨ COM 4
⑩ Video Output
⑪ Keyboard & Mouse connector
⑫ Slot-in / Storage bay
[Primary IDE Master]
⑬ CF card
⑭ Secondary IDE connector
(2.54mm Pitch Pin Header)
⑮ PCI/ISA ×2

*** Mounting Depth**

■Specifications

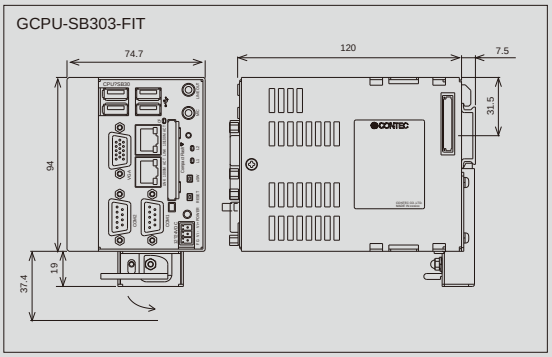
Model	GCPU-SB303-FIT [CPU-SB303-FIT]	GCPU-SB303-FIT-3F [CPU-SB303-FIT-3F]
CPU	Ultra Low Voltage Intel® Celeron® Processor 800MHz (FSB400MHz)	
Chipset	Intel® 852GM+ICH4	
Memory	512MB, 1× 200-pin SO-DIMM socket, PC2100(DDR266) DDR SO-DIMM	
Compact Flash	1× CF CARD Type I, II (Primary IDE Master)	CF on board (2GB, 1 partition)
Wired LAN	LAN1: 1× 100BASE-TX/10BASE-T, RJ-45 connector (Bulit in Intel ICH4) LAN2: 1× 1000BASE-T, RJ-45 connector (Intel 82541PI)	
Supproted Resolution	640×480, 800×600, 1,024×768, 1,152×864, 1,280×600, 1,280×720, 1,280×960, 1,280×1,024, 1,400×1,050, 1,600×900, 1,600×1,200, 1,856×1,392, 1,920×1,080, 1,920×1,200(16,770,000 colors), 1,920×1,440(65,536 colors)	
CRT I/F	1 × Analog RGB (15-pin HD-SUB connector),	
Keyboard I/F	USB 2.0 *1	
Mouse I/F	USB 2.0 *1	
FDD I/F	USB 2.0 *1	
IDE I/F	Secondary: Dedicated 40-pin, half-pitch connector on bottom of unit (for optional CD/DVD-ROM drive)	
Serial I/F	RS-232C(general-purpose): 2ch, 9 pin D-SUB male connector, Baud rate: 50~115,200bps	
USB I/F	4ch USB 2.0 compliant: (High / Full / Low Speed)	
F&eIT I/F	8 F&eIT series device modules can be connected (max) *2*3 (power consumption of external units cannot exceed 3.0A)	
Audio	Output: Line Out ×1 (stereo output level 8 Ω200mW S/N ratio:90dB), Input: MIC×1 (Monaural), Plug: Φ3.5 Stereo mini jack	
RAS function	WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs	
RTC/CMOS	Lithium backup battery life: 10 years or more	
Supported OS	Windows XP Embedded Windows XP Professional Microsoft Windows 2000 Professional IBM PC-DOS 2000 Ver.7.0 Linux 2.6 kernel (TurboLinux 10 server)	Windows XP Embedded C drive (NTFS) [Space Used: 683MB, Space Free: 1.22GB] EWF partition [Space Used: 6MB]
Power Supply	12~24VDC	
Current Consumption (Max.)*6	12V: 2.4A / 24V: 1.3A	
Operating / Storage Temp / Humidity	0~50°C / -10~60°C / 10~90%RH (no condensation)	
Floating Dust Particles/Corrosive Gases	IP20 (Normal) / None	
Noise resistance – Static electricity	Contact discharge / ±4kV (IEC61000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC61000-4-2Level3, EN61000-4-2Level3)	
Noise resistance – Line-noise*5	AC line/±2kV, Signal line/±1kV (IEC61000-4-4Level3, EN61000-4-4Level3)	
Vibration Resistance – Sweep Resistance	10~57Hz / semi-amplitude 0.15mm, 57 - 150Hz / 5.0G, 40 min. each in x, y, and z directions (JIS C60068-2-6, IEC60068-2-6 compliant)	
Impact Resistance	15G, half-sine shock for 11 ms in x, y, and z directions (JIS C60068-2-27, IEC60068-2-27 compliant)	
Grounding	Class D grounding (previous class 3 grounding)	
Dimensions (mm)	74.7(W)×120.0(D)×94.0(H)	
Weight	800g (with DIN-rail mounting hardware: 900g)	

Notes

*1: Please use USB ports to connect keyboard / mouse / FDD
*2: The total maximum power consumption of the modules cannot exceed the rated output current of the power supply
*3: The stack connector supplies power to the device modules. The rated current of stack connector is 3.0A (max).
*4: If the unit is mounted upside down and used in a high-temperature environment, even if the temperature is within the specified range, please add a fan to the system configuration.
*5: When using AC-DC power unit PBA75F-24 (Mftr. - Corsel Company)
*6: When using with device modules, CONTEC recommends using a power supply with a minimun of 70W. When using only the main unit, a power supply of 50W(min) is recommended. The following DIN-rail mountable power supplies are recommended -
DLP75-24-1 (75W / Mftr. - Densei-lambda), PS5R-SD24 (60W / Mftr. - IDEC), S8VS-06024 (60W / Mftr. - OMRON)

Dimensions

GCPU-SB303-FIT



Unit: (mm)

■Specifications

Model	GPC-BX840P2-DC4 [IPC-BX840P2-DC400]	GPC-BX840P2-DC45F [IPC-BX840P2-DC45F]	IPC-BX840RP2-DC456
CPU	Ultra Low Voltage Intel® Celeron® Processor 800MHz (FSB400MHz)		
Chipset	Intel® 852GM+ICH4		
Memory	512MB, 1× 200-pin SO-DIMM socket, PC2100(DDR266) DDR SO-DIMM		
PC Card slot	-		
Compact Flash	1× CF CARD Type I (dedicated to memory card), bootable (PrimaryMaster, PrimarySlave switch-able)		
Wired Card slot	-	CF on board (2GB) *1	
Wired LAN I/F	1× 100BASE-TX/10BASE-T, RJ-45 connector		
Wired LAN Controller	Bulit in Intel ICH4		
Wireless LAN	-		IEEE802.11a/b/g compliant (see complete Wireless specs.below)
Expansion slots	2× Low Profile PCIslots, Installable size: 140(L) × 63.41(H) mm		
Supproted Resolution	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors), 1,600×1,200(16,770,000 colors)*2		
CRT I/F	1 x Analog RGB (15-pin HD-SUB connector)		
LCD I/F	1 x LVDS (26-pin Half-pitch connector)		
Keyboard I/F	USB 2.0 *3		
Mouse I/F	USB 2.0 *3		
FDD I/F	USB 2.0 *3		
IDE I/F	36-pin Half Pitch connector located on left side (for connection of CD/DVD-ROM using optional cable)		
Serial I/F	3ch RS-232C (general-purpose) / Serial ports 1, 2, 3 / 9 pin D-SUB male connector / Baud rate: 50~115,200bps 1ch for touch panel / Serial port 4 (inside LVDS connector); 1ch for microcontroller communication / Serial port 5 *4		
Parallel I/F	-		
USB I/F	2ch USB 2.0 compliant		
General-purpose I/O	-		
Audio	AC97 compliant; Line Out: Φ3.5 Stereo mini jack, Full-scale output level 1.5Vrms(Typ.), Dual 50mW Amplifier; MIC Input: Φ3.5 Stereo mini jack, Full-scale output level 1.6Vrms(Typ.)		
RAS function	WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs		
RTC/CMOS	Lithium backup battery life: 10 years or more, RTC precision (25°C): ±3 min. per month (RTC included in the ICH4)		
Supported OS	Windows XP Embedded		
Power Supply	12~24VDC ±5%		
Current Consumption (Max.)	12V 2.2A / 24V 1.1A		
Power Outage	-		
Dielectric Strength	-		
Operating / Storage Temp / Humidity	0~50°C *6 / -10~60°C / 10~90%RH (no condensation)		
Floating Dust Particles/Corrosive Gases	IP20 (Normal) / None		
Noise resistance Static electricity	Contact discharge / ±4kV (IEC61000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC61000-4-2Level3, EN61000-4-2Level3)		
Noise resistance Line-noise	AC line/±2kV, Signal line/±1kV (IEC61000-4-4Level3, EN61000-4-4Level3)		
Vibration Resistance Sweep Resistance	10~57Hz / semi-amplitude 0.375mm 57 - 500Hz / 5.0G, 60 min. each in x, y, and z directions (JIS C60068-2-6, IEC60068-2-6 compliant)		
Impact Resistance	15G, half-sine shock for 11 ms in x, y, and z directions (JIS C60068-2-27, IEC60068-2-27 compliant)		
Grounding	Class D grounding (previous class 3 grounding)		
Dimensions (mm)	251(W)×152(D)×56(H)		
Weight	Approx. 2.0kg		

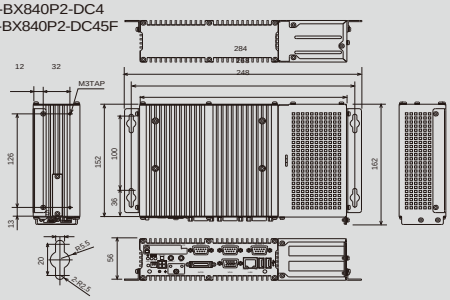
Notes
*1: CF size is calculated based on 100,000,000 byte = 1GB. Capacity recognized by the OS may sometimes be less than the actual value.
*2: Not supported by LVDS I/F.
*3: Use USB ports to connect keyboard / mouse
*4: For internal system use - not user accessible
*5: If used in a high-temperature environment, even if the temperature is within the specified range, please add a fan to the system configuration.

■Wireless LAN Specifications

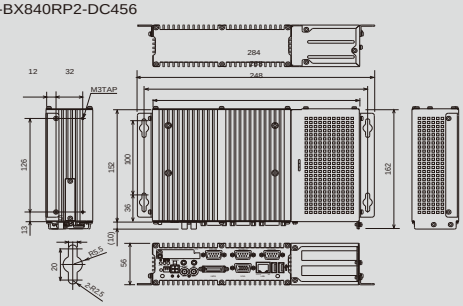
Model	IPC-BX840RP2-DC456
Wireless LAN IEEE802.11a	
Interface type	IEEE802.11a-compliant OFDM (Orthogonal Frequency Division Multiplexing)
Channel	12ch (34,38,42,46ch[J53]; 36,40,44,48ch[W52]; 52,56,60,64ch[W53])
Data Speed	54, 48, 36, 24, 18, 12, 9, 6Mbps
Access Method	CSMA/CA + ACK (RTS/CTS)
Wireless LAN category	Low-power Data Transmission System (5.150~5.350GHz)
Aerial Power	10Mw/MHz or less
Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(above methods can be used simultaneously), IEEE802.1X
IEEE802.11b	
Interface type	IEEE802.11b-compliant DSSS (Direct Sequence Spread Spectrum)
Channel	14ch (1~14)
Data Speed*7	11, 5.5, 2, 1Mbps (automatic)
Access Method	CSMA/CA + ACK (RTS/CTS)
Wireless LAN category	Low-power Data Transmission System (2.4~2.497GHz)
Aerial Power	10Mw/MHz or less
Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(above methods can be used simultaneously), IEEE802.1X
IEEE802.11g	
Interface type	IEEE802.11g-compliant OFDM (Orthogonal Frequency Division Multiplexing)
Channel	13ch (1~13)
Data Speed*7	54, 48, 36, 24, 18, 12, 9, 6Mbps (automatic)
Access Method	CSMA/CA + ACK (RTS/CTS)
Wireless LAN category	Low-power Data Transmission System (2.4~2.497GHz)
Aerial Power	10Mw/MHz or less
Security	WEP, WPA(AES,TKIP), WPA-PSK(AES, TKIP), WSL(above methods can be used simultaneously), IEEE802.1X

Dimensions

GPC-BX840P2-DC4
GPC-BX840P2-DC45F



IPC-BX840RP2-DC456



Unit: (mm)

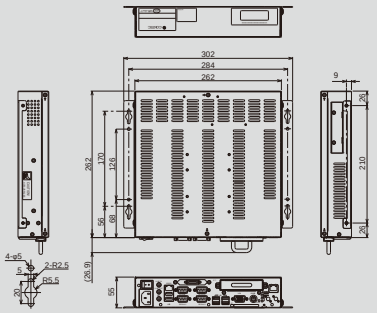
BOX-PCs®

■Specifications

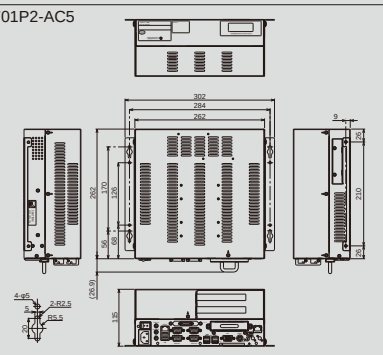
Model	GPC-BX701-AC5 [IPC-BX701-AC5] GPC-BX701P2-AC5 [IPC-BX701P2-AC5] GPC-BX701P4-AC5 [IPC-BX701P4-AC5]
CPU	Ultra Low Voltage Intel® Celeron® M Processor 1.0GHz (FSB400MHz)
Chipset	Intel® 855GME
Main Memory	1GB (1× 2.5V 184-pin DDR SDRAM PC2700 DIMM Socket)
PC Card slot	-
Compact Flash	1× Bootable CF Card Type I (dedicated to memory card, Secondary-IDE Slave)
Wired LAN	LAN1: 100BASE-TX/10BASE-T RJ-45 connector LAN2: 1000BASE-T/100BASE-TX/10BASE-T RJ-45 connector
Expansion slots	GPC-BX701-AC: None GPC-BX701P2-AC: 2 x PCI/ISA slots GPC-BX701P4-AC: 2 x PCI/ISA slots, 2 x PCI slots Installable board length: 240mm (max)
Supproted Resolution	640×480(16,770,000 colors), 800×600(16,770,000 colors), 1,024×768(16,770,000 colors), 1,280×1,024(16,770,000 colors), 1,600×1,200(16,770,000 colors)
CRT I/F	1× Analog RGB (15-pin HD-SUB connector), 1× LVDS (26-pin Half-pitch connector)
LCD I/F	-
Keyboard I/F	PS/2 (6-pin mini-DIN connector)
Mouse I/F	PS/2 (6-pin mini-DIN connector)
FDD I/F	-
IDE I/F	Primary: Ultra DMA/100, One 2.5-inch IDE HDD or silicon disk drive mounted [Primary IDE Master]; Secondary: Dedicated 40-pin, half-pitch connector (for an optional CD-ROM/DVD-ROM drive) (Side in the right)
Serial I/F	RS-232C(general-purpose): 4ch (SERIAL PORT1, 2, 3, 4) 9 pin D-SUB connector, Baud rate: SERIAL 1, 2 is 50~115,200bps, SERIAL 3, 4 is 50~230,400bps
Parallel I/F	-
USB I/F	6ch USB 2.0-compliant
General-purpose I/O	-
Audio	AC97 compliant; Line In: Φ3.5 Stereo mini jack, Full-scale output level 1.6Vrms(Typ.); Line Out: Φ3.5 Stereo mini jack, Full-scale output level 1.5Vrms(Typ.), Dual 50mW Amplifier; MIC Input: Φ3.5 Stereo mini jack, Full-scale output level 1.6Vrms(Typ.)
RAS function	WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs
RTC/CMOS	Lithium backup battery life: 10 years or more, RTC precision (25°C): ±3 min. per month (RTC included in the ICH4)
Supported OS	Windows XP Professional, Windows XP Embedded
Power Supply / Allowable Instantaneous Power Outage	85 - 132VAC/170 - 265VAC(47 - 63Hz) auto switching / Less than 20ms
Current Consumption (Max.)	GPC-BX701-AC5: 50VA GPC-BX701P2-AC5: 90VA GPC-BX701P4-AC5: 115VA
Dielectric Strength	1 minute each for AC2.0kV (input - FG) 20mA
Insulation Resistance	50MΩ (500VDC)
Operating / Storage Temp / Humidity	Using SDD[1]: 0~50°C / Using HDD: 5~45°C / -10~60°C / 10~90%RH (no condensation)
Floating Dust Particles/Corrosive Gases	IP20 (Normal) / None
Noise resistance — Static electricity	Contact discharge / ±4kV (IEC61000-4-2Level2, EN61000-4-2Level2), Atmospheric Discharge / ±8kV (IEC61000-4-2Level3, EN61000-4-2Level3)
Noise resistance — Line-noise	AC line/±2kV, Signal line/±1kV (IEC61000-4-4Level3, EN61000-4-4Level3)
Vibration Resistance — Sweep Resistance	10 - 57Hz/semi-amplitude 0.15mm 57 - 150Hz/2.0G, 40min each in x, y, and z directions (JIS C60068-2-6, IEC60068-2-6 compliant)
Impact Resistance	10G, half-sine shock for 11ms in x, y, and z directions (JIS C60068-2-27, IEC60068-2-27 compliant)
Grounding	Class D grounding (previous class 3 grounding)
Dimensions (mm)	GPC-BX701-AC5: 262(W)×262(D)×55(H) GPC-BX701P2-AC5: 262(W)×262(D)×115(H) GPC-BX701P4-AC5: 262(W)×262(D)×160(H)
Weight	GPC-BX701-AC5: Approx. 3.3kg GPC-BX701P2-AC5: Approx. 4.0kg GPC-BX701P4-AC5: Approx. 4.6kg
Notes	*1: When using Windows operating systems.

Dimensions

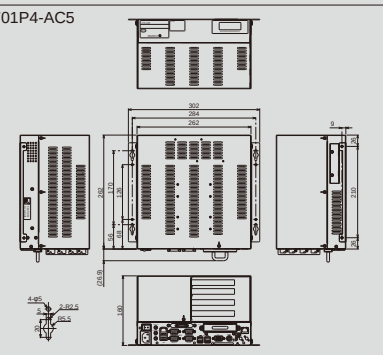
GPC-BX701-AC5



GPC-BX701P2-AC5



GPC-BX701P4-AC5



Unit: (mm)

■Related G series Products

I/O Controller Module

GCPU-CA10(USB)GY
[CPU-CA10(USB)GY]

USB 2.0

CE

Included Software:
• API-USBP(WDM)- Driver library for Windows

Features

- Power saving and low heat-generating CPU. Compact design for minimal installation space.
- Used to configure PC-based remote I/O system via USB. Wide-range of stack connected device modules to choose from.

I/O Controller Module

High-speed/high-performance model

GCPU-CA20(FIT)GY
[CPU-CA20(FIT)GY]

CE

GCPU-CA10(FIT)GY
[CPU-CA10(FIT)GY]

CE

Included Software:
• API-CAP(W32) - Driver library for Windows (for use with all F&eIT products)
• FIT-SVR(W32) - DDE, SuiteLink server
• Utility Software - for node setting and firmware updates

Features

- Power-saving and low heat-generating CPU
- Fanless operation
- Compact design allows for flexible installation sites
- Controls stack-connected device modules
- Can serve as the controller of a subsystem in a web-enabled I/O system when used with an I/O assist server / monitor and a control server
- Compliant with our multi-programmable display unit ACTIVE TOUCH, it can be used as a dedicated remote I/O device

Product Name	Equivalent Model	Description	Expansion Slots
GPC-BX700-AC4	IPC-BX700-AC400	BOX-PC with CeleronM 1.0GHz	N/A
GPC-BX700P2-AC4	IPC-BX700P2-AC400		2 x PCI/ISA
GPC-BX700P4-AC4	IPC-BX700P4-AC400		2 x PCI, 2 x PCI/ISA

■Latest G series Products

Product Name	Equivalent Model	Description	Expansion Slots
GPC-BX900-AC5	IPC-BX900-AC500	BOX-PC with CoreDuo 1.66GHz, 1GB, Dual GbE, VGA&LVDS	N/A
GPC-BX900P2-AC5	IPC-BX900P2-AC500	BOX-PC with CoreDuo 1.66GHz, 1GB, Dual GbE, VGA&LVDS	1xPCIe, 1xPCI
GPC-BX900P4-AC5	IPC-BX900P4-AC500	BOX-PC with CoreDuo 1.66GHz, 1GB, Dual GbE, VGA&LVDS	2xPCIe, 2xPCI
GPC-BX950T1-DC5	IPC-BX950T1-DC500	25mm Ultra Slim, Fanless Core Duo BOX PC w/Twin CF, Dual GbE	N/A
GPC-BX950T2-DC4	IPC-BX950T2-DC400	25mm Ultra Slim, Fanless Celeron M BOX PC w/Twin CF, Dual GbE	N/A

PANEL-PCs

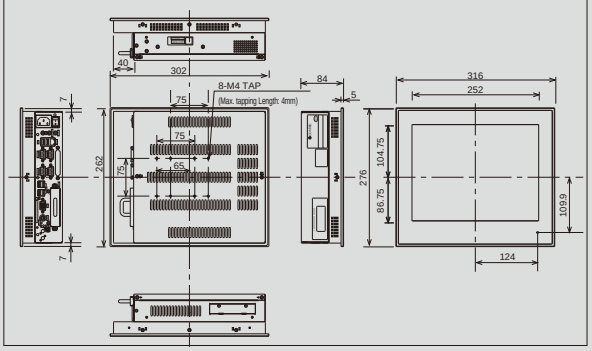
■Specifications

Model	GPC-PT700LS-AC4 [IPC-PT700LS-AC4]	GPC-PT700LS-W2AC4 [IPC-PT700LS-W2AC4]	GPC-PT700HX-AC4 [IPC-PT700HX-AC4]	GPC-PT700HX-W2AC4 [IPC-PT700HX-W2AC4]
CPU	Ultra Low Voltage Intel® Celeron® M Processor 1.0GHz (FSB400MHz)			
Memory	512 MB (2.5V 184-pin DDR SDRAM PC2700 DIMM Socket ×1)			
VGA	Intel® 855GME (built in controller)			
Display				
LCD type	12.1" TFT color LCD SVGA (800×600)		15" TFT color LCD XGA (1,024×768)	
Number of Colors	260,000 colors			
Touch Panel				
Resolution	4,096×4,096 (emulated in 800×600)		4,096×4,096 (emulated in 1,024×768)	
Detection Method	Analog resistive			
Backlight ON/OFF	Enabled (controlled via software)			
Membrane Switch	-			
Interfaces				
CRT I/F	1× Analog RGB (15-pin HD-SUB connector)			
Keyboard I/F	PS/2 keyboard-compliant (6-pin MINI DIN connector)			
Mouse I/F	PS/2 mouse-compliant (6-pin MINI DIN connector)			
FDD I/F	-			
IDE I/F	Primary: Ultra DMA/100, 2.5-inch IDE HDD or silicon disk drive: 1 internal unit (additional drive can be added. One of the two must be a silicon disk drive) Secondary: 40-pin half pitch connector located on bottom (for optional CD-ROM)			
Serial I/F	RS-232C(general-purpose): 4ch (Serial Ports 1, 2, 3, 4) 9 pin D-SUB connector, Baud rate: Serial ports 1, 2 - 50~115,200bps Serial ports 3, 4 - 50~230,400bps			
Parallel I/F	-			
USB I/F	6ch (USB 2.0 specification)			
Wired LAN	100BASE-TX / 10BASE-T RJ-45 RJ-45 connector, included in Intel ICH4			
Compact Flash	1× CF Card Type I (dedicated to memory card, Secondary-IDE Slave), bootable			
General-purpose I/O	-			
Audio	AC97 compliant, LINE IN/LINE Out/MIC: mini jack			
RAS function	WDT: software programable, 255 level (1sec to 255sec); RESET when time-up occurs			
Supported OS	Windows XP Professional, Windows XP Embedded			
Expansion slots	None	2 x PCI/ISA slots *1	None	2 x PCI/ISA slots *1
Power Supply	85~132 VAC and 170~265 VAC (47~63 Hz) auto switching / -			
Dimensions (mm)	316(W)×84(D)×276(H)	316(W)×144(D)×276(H)	373(W)×84(D)×304(H)	373(W)×144(D)×304(H)
Weight (excluding storage devices)	Approx. 5.9kg	Approx. 6.8kg	Approx. 7.0kg	Approx. 7.9kg

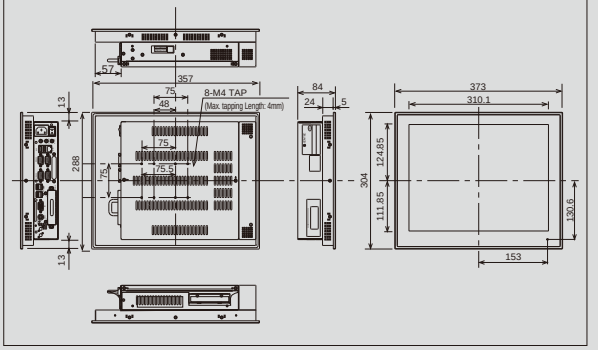
*1 Maximum installable board length: 240mm.

Dimensions

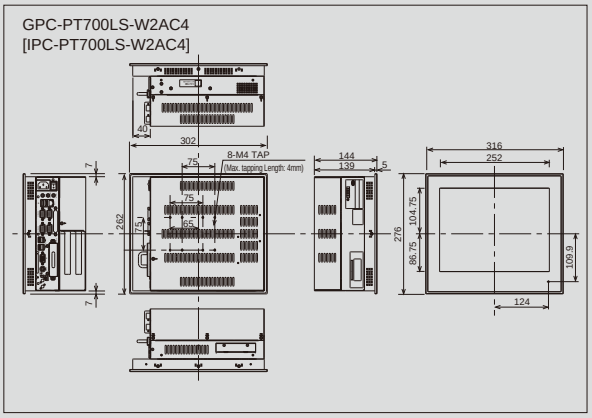
GPC-PT700LS-AC4
[IPC-PT700LS-AC4]



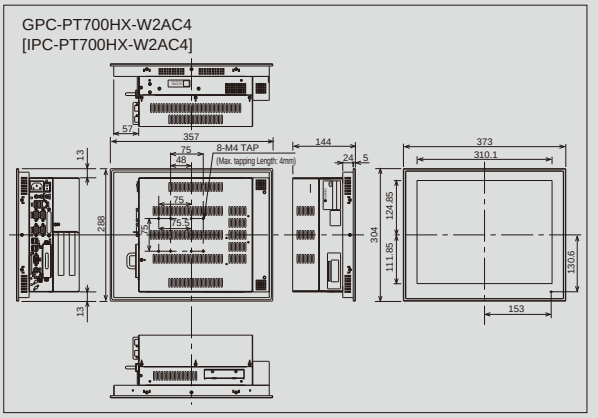
GPC-PT700HX-AC4
[IPC-PT700HX-AC4]



GPC-PT700LS-W2AC4
[IPC-PT700LS-W2AC4]



GPC-PT700HX-W2AC4
[IPC-PT700HX-W2AC4]



Unit: (mm)

■Additional G series 15” Display Panel PCs

Model	Description	Description	Description	Expansion Slot
IPC-TP15LBCM (B)	Celeron M 800MHz	512MB	Black, Slim Bezel	N/A
IPC-TP15LBCM (S)			Silver, Slim Bezel	N/A
IPC-TP15LBCMEP1(B)			Black, Slim Bezel	1xPCI
IPC-TP15LBCMEP1(S)			Silver, Slim Bezel	1xPCI
IPC-TP15LBPM1 (B)	Pentium M 1.2GHz		Black, Slim Bezel	N/A
IPC-TP15LBPM1 (S)			Silver, Slim Bezel	N/A
IPC-TP15LBPM1EP1 (B)			Black, Slim Bezel	1xPCI
IPC-TP15LBPM1EP1 (S)			Silver, Slim Bezel	1xPCI
IPC-TP15LBPM2 (B)	Pentium M 1.8GHz		Black, Slim Bezel	N/A
IPC-TP15LBPM2 (S)			Silver, Slim Bezel	N/A
IPC-TP15LBPM2EP1 (B)			Black, Slim Bezel	1xPCI
IPC-TP15LBPM2EP1 (S)			Silver, Slim Bezel	1xPCI
IPC-TP15LBVIA (B)	VIA C3 1GHz		Black, Slim Bezel	N/A
IPC-TP15LBVIA (S)			Silver, Slim Bezel	N/A
IPC-TP15LBVIAEP1(B)			Black, Slim Bezel	1xPCI
IPC-TP15LBVIAEP1(S)			Silver, Slim Bezel	1xPCI
IPC-TP15LCM (B)	Celeron M 800MHz		Black	N/A
IPC-TP15LCM (S)			Silver	N/A
IPC-TP15LCMEP1 (B)			Black	1xPCI
IPC-TP15LCMEP1 (S)			Silver	1xPCI
IPC-TP15LCPM2(B)	Pentium M 1.8GHz		Wide Steel Bezel, Black	N/A
IPC-TP15LCPM2EP1(B)				1xPCI
IPC-TP15LCPM2EP1G(B)			Wide Steel Bezel, Black, 100-24VAC	1xPCI
IPC-TP15LPM1 (B)	Pentium M 1.2GHz		Black	N/A
IPC-TP15LPM1 (BL)			Grey Black	N/A
IPC-TP15LPM1 (S)			Silver	N/A
IPC-TP15LPM1EP1 (B)			Black	1xPCI
IPC-TP15LPM1EP1 (S)			Silver	1xPCI
IPC-TP15LPM2 (B)	Pentium M 1.8GHz		Black	N/A
IPC-TP15LPM2 (S)			Silver	N/A
IPC-TP15LPM2EP1 (B)			Black	1xPCI
IPC-TP15LPM2EP1 (S)			Silver	1xPCI
IPC-TP15LVIA (B)	VIA C3 1GHz		Black	N/A
IPC-TP15LVIA(S)			Silver	N/A
IPC-TP15LVIAEP1(B)			Black	1xPCI
IPC-TP15LVIAEP1(S)			Silver	1xPCI

IPC-TP15Lxxxx

IPC-TP15LBxxxx

IPC-TP15LCxxxx

PANEL-PCs for Windows CE

Rugged, Rust free Stainless Steel Panel PC
Excellent protection against dust and water

IPC-PT 020 Series

Windows CE .NET 4.2, Fanless, SH-4 240MHz
Panel PC 020 Series

IPC-PT020LS-AC-4E

12.1inch TFT | Touch Panel | SVGA | IPX2 | IP65 | CE

Right side

56.5mm

Front

Bottom

Bottom (no water-proof cover)

Back

Features

● Drip proof IPX2-compliant exterior, dust proof / water proof IP65-compliant front panel

The IPX2-compliant exterior is drip proof while the front panel is IP65-compliant providing protection from dust and water.
The front panel features a durable glass sealed analog touch screen.

● Rust-resistant stainless steel enclosure

The stainless steel exterior is rust-resistant and provides protection against dripping liquids.

● Standard PC interfaces

Interfaces include 2 x USB, PC card (2 x Type II or 1 x Type III),100BASE-TX ×1, RS-232C ×2, Analog RGB and stereo sound.A small speaker is preinstalled in the main unit, but an external speaker can be used. The Analog RGB interface enables the user to display 2 screens simultaneously. All interface drivers provided.

● Quick boot

This product employs the XIP & memory loading boot function for faster startup (about 10 seconds) and operation.

● Easy fitting

Features a 100mm VESA-standard mounting pattern for easy installation.

● Easy system development

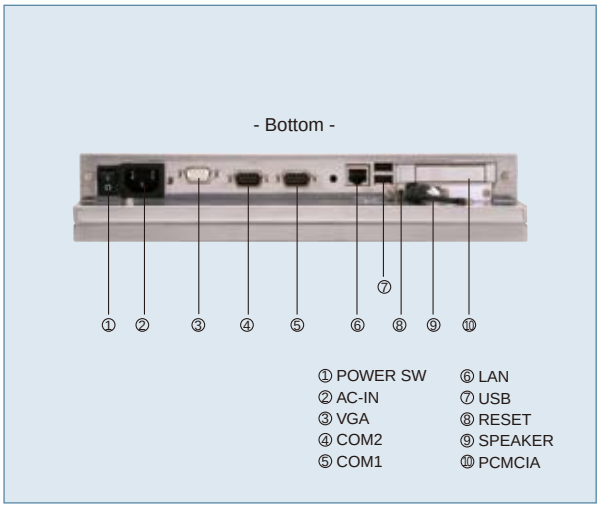
Microsoft's eMbedded Visual C++ 4.0 from enables easy software development using familiar Visual Studio environment.
In addition, the system ships with "CONTEC Manager" which supports system development with an FTP server, schedule, NTP auto time adjustment and AutoRUN functions.

◎IP Classifications

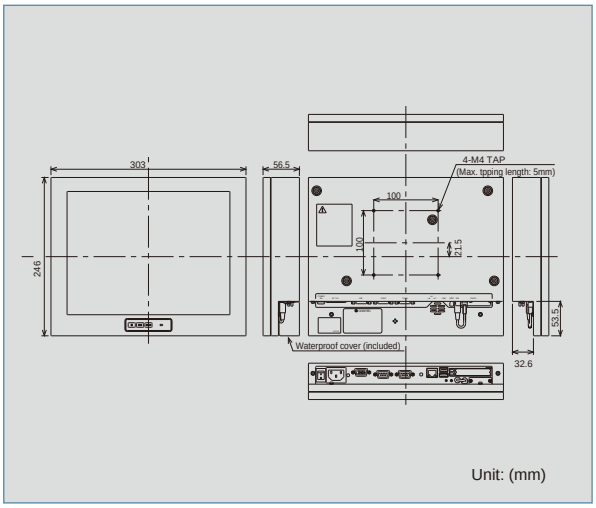
IP Classifications let the user know the level of protection that is provided to prevent damage by foreign objects and moisture.
· IP65 ... The unit is dust tight and protected against water projected in jets from any direction
· IPX2 ... The unit is protected against vertically falling water drops when enclosure is tilted up to 15°

PANEL-PCs for Windows CE

■Interfaces



■Dimensions



■Specifications

Model	IPC-PT020LS-AC-4E
CPU	SH-4 HD6417751RBP 240MHz
Memory	System memory: 128MB SDRAM, Flash memory (NFDISK)*1: 128MB, Flash memory for OS: 32MB
Display	
Type	12.1'' TFT color LCD SVGA (800×600)
Number of colors	65536
Touch panel	
Resolution	4,096×4,096 (emulated in 800×600)
Detection method	Analog resistive glass/glass-type
Interfaces	
Keyboard / Mouse	USB 1.1
Serial RS-232C	2ch: COM1(16550, 9-pin D-SUB), COM2(16550, 9-pin D-SUB, selectable RS-422A/485)
Audio	Φ3.5 Stereo mini jack Full-scale output level 1.0Vrms(Typ.)
Wired LAN	1× 10BASE-T/100 BASE-TX, [National Semiconductor] DP83816A
PC card slot	PCMCIA Type II ×2, or TypeIII ×1
General-purpose I/O	-
USB	2ch (USB1.1)
OS	Windows CE.NET 4.2
Power Supply / Allowable Instantaneous Outage	AC100V (input range: AC100V~240V 50VA) / 17ms or less
Dimensions (mm)	303(W) × 56.5(D) × 246(H)
Dimensions (mm) (excluding panel)	-
Ingress protection	Exterior: IPX2-compliant (standard installation), Front: Dust-proof / water-proof - IP65 compliant
Weight	Approx. 3.6kg *2

*1: Rewritable times: 300,000; MTBF=4,797,667 hours.(Rate of CF card presumed failure)
*2: Excluding cables.

■Optional Accessories

Name	Description
Stand	
IPC-SND-03	Desk Stand
Manuals	
IPC-PT020LS-HME	Hardware manual for the Panel PC 020 series with .NET4.2 SH-4 (English)
IPC-SH4CD4-SME	Software manual (English)

Flat Panel Displays

Analog RGB Input, Slimline Design

FPD-21 Series (AC Input Type)

Panel-Mount Analog RGB input Flat Panel Display

RoHS Compliant

Analog RGB | Touch Panel | IP65 | NEW

15inch TFT XGA

15" TFT color
XGA (1024×768)

GFPD-H21XT-AC [FPD-H21XT-AC]

12.1inch TFT SVGA

12.1" TFT color
SVGA (800×600)

GFPD-L21ST-AC [FPD-L21ST-AC]

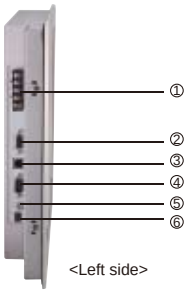
10.4inch TFT VGA

10.4" TFT color
VGA (640×480)

GFPD-M21VT-AC [FPD-M21VT-AC]

Comments of Interface

■ FPD-H21XT-AC
■ FPD-L21ST-AC
■ FPD-M21VT-AC



<Left side>

① Power Supply
② Analog RGB
③ USB Touch Panel
④ RS touch panel
⑤ Backgroud ON/OFF
⑥ Dip switch

Manual and touch-panel drivers are available on CD-ROM or you can download them for free from our Web site. AC power supply (IPC-ACCODE3) is purchased separately.

Features

- General-purpose analog RGB compliant input. RS-232C or USB*1 touch screen connection
- Auto-scaling function adjusts the input screen size to fit the LCD configuration
- On-screen display setup for easy screen adjustment
- IP65-compliant dustproof/waterproof front panel *2
- Panel size is compatible with IPC-DT/x6x series
- USB multi touch-panel configuration
- Backlight can be turned ON/OFF via front panel, software and external signals

Specifications

Model	GFPD-H21XT-AC	GFPD-L21ST-AC	GFPD-M21VT-AC
Assembly / Display type	Panel mounted / TFT Color LCD		
Screen Size	15"	12.1"	10.4"
Resolution	1024 × 768 (XGA)	800 × 600 (SVGA)	640 × 480 (VGA)
Number of Colors	16, 777, 216	262,144	
Screen Control	Automatic adjustment (display positioning and scaling),		
Brightness Control	Manual adjustment using the front switches		
Backlight Control	Adjustment using the front switch or software control from the host computer		
Display I/F	On or off via OSD switch or via software control from the host computer		
Incoming Signal	Analog RGB input HD-SUB 15-pin (female) connector		
Image signal	Separate RGB, analog, positive polarity: 0.7Vp-p/75 Ω		
Sync signal	Separate V/H, TTL, positive/negative polarity		
Hor. / Ver. Scan Frequencyx	31 to 38kHz / 60 to 72Hz	31 to 48kHz / 56 to 72Hz	31 to 60kHz / 56 to 75Hz
Cable Length	5m or less *1		
Touch Panel			
Resolution	4,096×4,096		
Detection Method	Analog resistive		
Touch Life Expectancy	One million repeated touches (3N silicon rubber load, speed 2 times/sec)		
Touch Panel I/F	Connect to the host computer using either USB*2 or RS-232C: USB: USB1.1-compliant, Type-B Connector; RS-232C: 9-pin D-SUB (male) Connector		
Input power supply voltage	Auto-switched 85 - 132VAC / 170 - 265VAC (47 - 63Hz) input		
Power Consumption (Max.)	60VA	40VA	36VA
Operating / Storage Temp / Humidity	0~50°C / -10~60°C / 10~90%RH (no condensation)		
Floating Dust Particles / Corrosive Gases	IP20 (Normal) / None		
Ingress protection	Front panel - IP65-compliant		
Dimensions (mm)	373(W)×54(D)×304(H)	316(W)×54.5(D)×256(H)	305(W)×51.5(D)×240(H)
Weight	4.5kg	3.2kg	3.0kg

*1: The quality of the image may decrease if a cable longer than 5m is used. Since display quality can also be affected by the host computer or the type of cable, even those shorter that 5M, please select an appropriate length cable
*2: USB Touch Panel option is only available when using Windows® XP/2000/98SE.

Optional Accessories

Name	Description
Protective Screen Covers	
IPC-CV	Protective Covers for 10.4" display (10pcs)
IPC-CV12	Protective Covers for 12.1" display (10pcs)
IPC-CV15	Protective Covers for 15" display (10pcs)

The user's manual (PDF) can be download from CONTEC's homepage.

Name	Description
Cable	
IPC-ACCODE3	AC power cable (2m, 125VAC)
IPC-CBL3-2	Touch Panel COM cable (2m)
IPC-CBL3-5	Touch Panel COM cable (5m)
Driver	
IPC-SLIB-01	Driver & Utility software (CD-ROM)

Additional G-Series Displays

Model	Description
ITLCD-15L(X)-A	15", TFT, Flat Panel Display (XGA) AC input
ITLCD-15L(X)-A(T)	15", TFT, Touch screen, Flat Panel Display (XGA) AC input

PICMG (PCI/ISA) Full Size | Chip Set 855GME | Memory Max.2GB DDR SDRAM | USB 2.0 | Audio | CF (Option) | SSD (Option) | CE

Full-size Sibgle Board Computer for PICMG

GPI-8550-LLAS [SPI-8550-LLVAS]

CPU Option | FAN -less | Analog RGB | Dual LAN | DVI | SATA

Full-size Sibgle Board Computer for PICMG

GPI-8550-LA [SPI-8550-LA]

CPU Option | FAN -less | Analog RGB | LAN

COMMON:

- Supports Intel® Pentium® M 1.6G~2.0GHz, Intel® Celeron® M 1.3G~1.5GHz
- Supports up to 2GB DDR SDRAM, ECC support
- LCD can be connected directly to LVDS port
- Type I/II CF card slot - supports boot-up from CF card

GPI-8550-LLAS

- 2 serial ATA(SATA) - supports RAID
- On-board DVI-I and LVDS - supports Dual View
- GB LAN [Intel 82541 controller]

GPI-8550-LA

- Analog RGB and LVDS - supports Dual View

Model	GPI-8550-LLAS	GPI-8550-LA
CPU *1 (Option)	Intel® Pentium® M Processor 1.6GHz to 2.0GHz (FSB400MHz) Intel® Celeron® M Processor 1.3GHz to 1.5GHz (FSB400MHz)	
Cache	Built in CPU	
Processor socket	Socket 478	
Memory(Option)	2 x 184-pin SO-DIMM sockets, PC2700 DDR SDRAM for up to 2GB ECC support	
Chipset	Intel® 855GME + ICH4	
BIOS	Phoenix BIOS , PnP support	
VGA	Built in Intel 855GME 1 x LVDS connector 1 x DVI-I connector	1 x Analog RGB
Keyboard / Mouse connector	1 x PS/2 keyboard / Mouse connector (Y cable included) 1 x 5pin box-header for external keyboard	
Serial I/F	1 x 10pin box-header - COM1: RS-232C 1 x 10pin box-header - COM2: RS-232C / 422 / 485	
Parallel I/F	1 x 26pin box-header	
On board expansion bus	-	
LAN Port	100BASE-TX, Intel ICH4	
	1000BASE-T/100BASE-TX, Intel 82541PI 2 x RJ-45 connector, Wake On LAN support	1 x RJ-45 connector, Wake On LAN support
IDE I/F	2x EIDE ports, up to 4x devices, supports Ultra DMA 33/66/100*2, 2x 40-pin box-headers	
SATA I/F	2x Serial ATA 1.0 connectors	-
FDD I/F	1x 34pin connector, 2 modes	
Compact Flash Slot	1x bootable CF card (Type II) slot	
SSD Socket	-	
USB Port	6ch USB 2.0-compliant, 3x 10pin box-headers	
RAID	Supports RAID 0/1	-
Audio	AC97 Codec, 1x 10pin header connector	
Watchdog Timer	255 levels (1-255Sec.). Reset when time up	
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed	
RTC	CR2450 battery / Expected backup time with no power @ 25°C is > 7 yrs	
Power Management	Power management setup via BIOS, Modem ring On /Wake on LAN, Supports PC98 / PC99 ACPI power management	
Bus specification / Size	PICMG / 388mm(L) x 122mm(H)	
Power consumption (Max.)	[Pentium M 1.6GHz] +5VDC: 9.0A +12VDC: 0.25A 5VSB(Stand by): 0.5A	
Operating temperature	0~60°C, dependent upon CPU and heat sink specifications	
Humidity	5~90%RH (No condensation)	
Weight	390g	
Notes	*1: Please visit our website for updated information on supported CPUs. *2: Secondary IDE port cannot be set to Ultra DMA 66/100 when CF card is used.	

■ Packing List

GPI-8550-LLAS / GPI-8550-LA	
Product Guide	1
IDE 80-pin Ribbon Cable	1
SATA Cable	4
FDD Ribbon Cable	1
Drivers & Utilities (CD-ROM) *	1
Serial port (9-pin D-SUB male x 2) Ribbon Cable (with Bracket)	1
Audio Jack Cable (with Bracket)	1
6-pin mini-DIN Cable (Y Cable)	1

*User's Manual included on CD-ROM

■ Optional Accessories

GPI-8550-LLAS / GPI-8550-LA	
CPU with Heatsink	
GPCPM-16	Pentium M processor 1.6GHz w/Heat sink
GPCPMC-13	Celeron M processor 1.3GHz w/Heat sink
CPU with Heatsink and Fan	
GPCPM-16F	Pentium M processor 1.6GHz w/Heat sink Fan
GPCPMC-13F	Celeron M processor 1.3GHz w/Heat sink Fan
Cooling Parts	
Heatsink	Heat sink for GLC-8550-LA, GPC-8520-LA, GPI-8550-LA/LLAS
Heatsink + FAN	Heat sink Fan for GLC-8550-LA, GPC-8520-LA, GPI-8550-LA/LLAS
Memory	
PC-MDD256-184A	DDR SDRAM DIMM(PC2700 256M)
PC-MDD512-184A	DDR SDRAM DIMM(PC2700 512M)
Cable	
USB Connector Cable	USB connector shielded cable
IDE-66 Cable	IDE Ultra ATA 100/66(80-pin Ribbon Cable)

BOARD-PC

PICMG (PCI/ISA) Full Size | Chip Set 852GM | Memory Max.2GB DDR SDRAM | USB 2.0 | CF (Option) | SSD (Option) | CE

Full-size Sibgle Board Computer for PICMG

GPI-8521-LA [SPI-8521-LA]

CPU ULV Celeron M 800MHz | FAN -less | Analog RGB | Dual LAN | Audio

- Equipped with Ultra Low Voltage Intel® Celeron® M 800MHz
- Supports up to 1GB DDR SDRAM (Max)
- Analog RGB and LVDS - supports Dual View
- LCD can be connected directly to LVDS port
- Type I/II CF card slot - supports boot-up from CF card

Model	GPI-8521-LA
CPU	Intel® Celeron® M Processor 800MHz (FSB400MHz)
Cache	L1: 32KB, L2: 0KB
Processor socket	N/A
Memory(Option)	2x 184-pin DIMM sockets, PC2700 DDR SDRAM up to 2GB
Chipset	Intel® 852GM + ICH4
BIOS	Award BIOS, PnP support
VGA	Built in Intel 855GME 1x Analog RBG interface (15-pin HD-SUB connector) 1x LVDS (18bit) interface (2x 20pin box-headers)
Keyboard / Mouse connector	1 x PS/2 keyboard / Mouse connector (Y cable included) 1 x 5pin box-header for external keyboard
Serial I/F	1x 10pin box-header - COM1: RS-232C, 1x 10pin box-header - COM2: RS-232C / 422A / 485
Parallel I/F	1x 26pin box-header
On board expansion bus	-
Wired LAN	100BASE-TX/10BASE-T, Intel® ICH4, 1x RJ-45 connector, Wake On LAN support
IDE I/F	2x EIDE connectors, Ultra DMA 33/66/100*1 2x 40pin box-headers, supports x4 devices (max)
SATA I/F	-
FDD I/F	1x 34pin box-header, 2 modes
Compact Flash Slot *1	1x bootable CF card (Type I/II) slot
SSD Socket	-
USB Port	6ch USB 2.0-compliant, 3x 10pin box-headers
RAID	-
Audio	AC97 CODEC, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.). Reset occurrence at the time of time up.
Hardware Monitor	Monitors CPU and board temperature, power supply voltage
RTC	CR2450 battery / Expected backup time with no power @ 25°C is > 7 yrs
Power Management	Power management setup via BIOS, Modem ring On /Wake on LAN, Supports PC98 / PC99 ACPI power management
Bus specification / Size	PICMG / 338mm(L) x 122mm(H)
Power consumption (Max.)	+5VDC, 5.2A +12VDC, according to External Fan +5VSB (Stand by), 0.5A
Operating temperature	0~50°C
Humidity	10~90%RH (No condensation)
Weight	880g
Notes	*1: Secondary IDE port cannot be set to Ultra DMA/66/100 when CF is used.

■ Packing List

GPI-8521-LA	
Product Guide	1
IDE 40-pin Ribbon Cable	1
IDE 80-pin Ribbon Cable	1
FDD Ribbon Cable	1
Drivers & Utilities (CD-ROM) *	1
Serial port (9-pin D-SUB male x 2) Ribbon Cable (with Bracket)	1
Parallel Port (25-pin D-SUB female x1) Ribbon Cable (with Bracket)	1
Audio Jack Cable (with Bracket)	1
6-pin mini-DIN Cable (Y Cable)	1

*User's Manual included on CD-ROM.

■ Optional Accessories

GPI-8521-LA	
Memory	
PC-MDD256-184A	DDR SDRAM DIMM(PC2700 256M)
PC-MDD512-184A	DDR SDRAM DIMM(PC2700 512M)
Cable	
USB Connector Cable	USB connector shielded cable
IDE-66 Cable	IDE Ultra ATA 100/66(80-pin Ribbon Cable)

PICMG (PCI/ISA) Full Size | Chip Set 845GV | Memory Max. 2GB DDR SDRAM | USB 2.0 | CF (Option) | SSD (Option)

Full-size Sibgle Board Computer for PICMG

GPI-8452-LLA [SPI-8452-LLVA]

RoHS Compliant

CPU Option | FAN -less | DVI | Analog RGB | Dual LAN | Audio

GPI-8451-LA [SPI-8451-LVA]

RoHS Compliant

CPU Option | FAN -less | Analog RGB | LAN | Audio | CE

COMMON:

- Supports Intel® Pentium® 4 Processor 1.7G-2.8GHz (FSB400/533MHz), Celeron® 1.7G-2.6GHz (FSB400MHz) and Celeron® D Processor 2.26G-2.8GHz (FSB533MHz)
- Full-size CPU Board is equipped with a variety of interfaces including EIDE, USB2.0×6, Audio, Serial×2, Parallel, PS/2
- Intel 845GV+ICH4 chip set
- Supports up to 2GB ECC SDRAM (max)

GPI-8452-LLA

- Analog RGB and LVDS interfaces allow supporting Dual View
- LVDS interface allows interconnection with panel-link type LCD
- GIGA bit LAN port uses Intel® 82541 controller

GPI-8451-LA

Model	GPI-8452-LLA	GPI-8451-LA
CPU *1	Intel® Pentium® 4 Processor 1.7G-2.8GHz (FSB400/533MHz), Northwood core only. Intel® Celeron® 1.7G-2.6GHz (FSB400MHz), Northwood core only. Intel® Celeron® D Processor 2.26G-2.8GHz (FSB533MHz)	
Cache	Built in CPU	
Processor socket	Socket 478	
Memory(Option)	2x 184-pin DIMM sockets, PC2700 DDR SDRAM up to 2GB	
Chipset	Intel® 845GV + ICH4	
BIOS	Phoenix BIOS, PnP support	
VGA	1x Analog RGB I/F (DVI-I connector) 1x LVDS(18bit) I/F (2x 20pin Box Header)	Built in Intel® 845GV, Analog RGB: 1x 15-pin HD-SUB
Keyboard / Mouse connector	1 x PS/2 keyboard / Mouse connector (Y cable included) 1 x 5pin box-header for external keyboard	
Serial I/F	1x 10pin box-header - COM1: RS-232C, 1x 10pin box-header - COM2: RS-232C / 422A / 485	
Parallel I/F	1x 26pin box-header	
On board expansion bus	-	
LAN Port	1000BASE-T/100BASE-TX/10BASE-T Intel® 82541PI, 100BASE-TX/10BASE-T Intel® ICH4, 2 x RJ-45 connector, Wake On LAN support	100BASE-TX/10BASE-T Intel® ICH4, 1 x RJ-45 connector, Wake On LAN support
IDE I/F	2x EIDE connectors, Ultra DMA 33/66/100	
SATA I/F	-	
FDD I/F	1x 34pin box-header, 2 modes	
Compact Flash Slot	-	
SSD Socket	-	
USB Port	6ch USB 2.0-compliant, 3x 10pin box-headers	
Audio	AC97 compliant, 1x 10-pin header connector (line-out, line-in, microphone-in)	
Watchdog Timer	255 levels (1 - 255Sec.). Reset or External ouput occurrs at the time of time-up	
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed	
Lithium Battery Life	>10 years with no power at 25°C	
Power management	Power management setup via BIOS, Modem ring On /Wake on LAN, Supports PC98 / PC99 ACPI power management	
Bus specification / Size	PCI/ISA (PICMG-compliant) / 338mm (L) × 122mm (H) *2	
Power consumption (Max.)	[Pentium® 4 2.8GHz] +5VDC, 5.4A; +12VDC, 7.0A; 5VSB(stand-by), 0.5A	
Operating temperature Humidity	0~60°C, (may vary depending upon CPU and Heat Sink) 10~90%RH (No condensation)	
Weight	517g	463g
Notes	*1: Please visit our website for updated information on supported CPUs. *2: Board depth requires x2 slots (excluding the height of the CPU).	

■ Optional Accessories

GPI-8452-LLA / GPI-8451-LA	
CPU (with FAN)	
PCP4-24	Pentium 4 2.4GHz (with heat sink and fan)
PCP4-28	Pentium 4 2.8GHz (with heat sink and fan)
PCP4C-20	Celeron 2.0GHz (with heat sink and fan)
Memory (PC2700 DDR SDRAM DIMM, ECC not support)	
PC-MDD256-184A	DDR SDRAM DIMM (PC2700, 256MB)
PC-MDD512-184A	DDR SDRAM DIMM (PC2700, 512MB)
Cable	
USB Connector Cable	USB connector cable (with bracket)
IDE-66 Cable	IDE Ultra ATA100/66 Ribbon cable (80-pin)

As shown on the side of product's images, RoHS compliant is a CONTEC original marking for RoHS-compliant products.

BOARD-PC

PCI Half Size | Chip Set 945GM | Memory Max.4GB DDR II SDRAM | USB 2.0 | CF (Option) | SSD (Option) | CE

Half-size Sibgle Board Computer for PCI

GPC-9450-LAS [SPC-9450-LAS] [SPC-9450-LAS]

CPU Option | FAN -less | DVI | Analog RGB | Audio

- Supports Intel® Core Duo and Core2 Duo(FSB533/677MHz)
- Intel® 945GME+GMCH chip set
- Analog RGB, LVDS and SVDO intervaces
- Supports RAID 0/1
- 2 serial ATA(SATA) - supports RAID
- GB LAN [Intel 82573 controller]
- DDRII SDRAM for up to 4GB(Memory Capacity: 3.1GB)
- CF card slot (Type I/II) - bootable

Model	GPC-9450-LAS
CPU (Option)	Intel® Core Duo / Core 2 Duo (FSB 533/667MHz)
Cache	Built in CPU
Processor socket	Socket M
Memory(Option)	2x 200-pin SO-DIMM socket, DDR2 400/533/667 for up to 4GB *1
Chipset	Intel® 945GME + ICH7M-DH
BIOS	Award BIOS, PnP support
VGA	Built in Intel® 945GME, 1 x Analog RGB D-SUB 15pin connector, 1 x LVDS(18bit) I/F: 30pin box header, 20pin box header, 1 x SDVO I/F (30pin box header) *2
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included)
Serial I/F	1 x 10pin box-header - COM1: RS-232C, 1 x 10pin box-header - COM2: RS-232C / 422A / 485 Baud rate: 50-115,200bps (programmable)
Parallel I/F	One box-header 26-pin connector
On board expansion bus	-
LAN Port	1000BASE-T/100BASE-TX, Intel 82573, 1 x RJ45 connector Wake On LAN support
IDE I/F	1 x EIDE port, 2 IDE devices (max.)
SATA I/F	2 x Serial ATA 1.0 compliant board
FDD I/F	1 x box-header 34-pin connector
Compact Flash Slot	1× CF card(Type I/II) slot, supports IDE slave/master connection, bootable *6
SSD Socket	-
USB Port	6ch USB2.0 compliant ports, two box-header 10-pin connectors (4ch), Two USB type A connectors support (2ch)
RAID	RAID 0/1
Audio	AC97 compliant, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.) Reset when time up
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed
RTC / CMOS	Expected backup time with no power @ 25°C is > 7 yrs
Power Management	Power management setup via BIOS Modem Ring On/Wake One LAN, Supports PC98/PC99 ACPI Power management
Bus specification / Size	PCI Bus 185 (L) x 122 (H) mm
Power consumption (Max.)	[Intel® Core TM2 Duo T7200 2.06GHz/667MHz] +12VDC ±5%: 3.0A / +5VSB ±5%: 0.5A
Operating temperature/ Humidity	0~60°C *5 / 10~90%RH (No condensation)
Weight	510g
Notes	*1: Available memory - 3.1GB (max), ECC not supported. *2: Cannot be used simultaneously with PCI-E X16 SDVO board. *3: 1000BASE-T supported by Windows 2000, XP. *4: IDE connection does not support Ultra DMA 66/100 mode when using CF card. *5: CF card does not support Hot Swap function. Do no install or remove card when power is on. Doing so can damage or destroy the CF. *6: IDE connection will only support one drive when using CF. *7: Dependent upon CPU specifications.

■ Packing List

GPC-9450-LAS	
Product Guide	1
IDE 80-pin Ribbon Cable	1
SATA Cable	4
FDD Ribbon Cable	1
Drivers & Utilities (CD-ROM) *	1
Serial port (9-pin D-SUB male x 2) Ribbon Cable (with Bracket)	1
Audio Jack Cable (with Bracket)	1
6-pin mini-DIN Cable (Y Cable)	1

*User's Manual included on CD-ROM.

PCI Half Size | Chip Set 852GM | Memory Max.1GB DDR SDRAM | USB 2.0 | Audio | CF (Option) | SSD (Option) | CE

Half-size Sibgle Board Computer for PCI

GPC-8521-LA [SPC-8521-LA]

RoHS Compliant

CPU Celeron M 800MHz | FAN -less | DVI | Analog RGB | LAN

GPC-8520-LA [SPC-8520-LA]

RoHS Compliant

CPU Option | FAN -less | DVI | Analog RGB | LAN

COMMON:

- Intel® 852GM+ICH4 chip set
- Supports up to 1GB DDR SDRAM SO-DIM (Max)
- Analog RGB and LVDS video interfaces support Dual View
- LVDS interconnects directly with panel-link LCD
- Type I CF card slot - bootable

GPC-8521-LA:

- Equipped with fanless Intel® Celeron® M 800MHz

GPC-8520-LA:

- Supports Intel® Pentium® M 1.6G~2.0GHz, Supports Intel® Celeron® M 1.3G~1.5GHz

Model	GPC-8521-LA	GPC-8520-LA
CPU	Intel® Celeron® M Processor 800MHz (FSB400MHz), Fan-less, CPU on board	Intel® Pentium® M,1.6G~2.0GHz Intel® Celeron® M,1.3G~1.5GHz 478-pin FC-PGA (FSB400MHz)
Cache	-	Built in CPU
Processor socket	-	Socket 478
Memory(Option)	1x 200-pin socket, PC2100 (DDR266) SDRAM, up to 1GB	
Chipset	Intel® 852GM + ICH4	
BIOS	Award BIOS, PnP support	
VGA	Built in Intel® 852GM, 1 x Analog RBG interface (15-pin HD-SUB connector), 1 x LVDS (18bit) interface (30pin box-header)	
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included) 1 x 5pin box-header for external keyboard	
Serial I/F	1x 10pin box-header - COM1: RS-232C, 1x 10pin box-header - COM2: RS-232C / 422A / 485	
Parallel I/F	1x 26pin box-header	
On board expansion bus	-	
Wired LAN	100BASE-TX/10BASE-T, Intel® ICH4, 1 x RJ-45 connector, Wake On LAN support	
IDE I/F	1 x EIDE connectors, Ultra DMA 33/66/100	
SATA I/F	-	
FDD I/F	1x 34pin box-header, 2 modes	
Compact Flash Slot *1	1x bootable CF card (Type II) slot	
SSD Socket	-	
USB Port	2ch USB 2.0-compliant, 2 x USB A connectors	
RAID	-	
Audio	AC97 CODEC, 1x 10-pin header connector (line-out, line-in, microphone-in)	
Watchdog Timer	255 levels (1 - 255Sec.). Reset when time up	
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed	
RTC	>10 years with no power at 25°C	
Power Management	Power management setup via BIOS, Modem Ring On/Wake On LAN, Supports PC98/PC99 ACPI Power management	
Bus specification / Size	PCI / 185mm (L) × 185mm (H) × 41mm(W)*2	PCI / 185mm (L) × 122mm (H) × 28mm(W)
Power consumption (Max.)	+5VDC±5%, 5.0A +5VSB (Stand by)±5%, 0.5A	Using Pentium® M1.6GHz, +5VDC ±5%: 9.0A / +5VSB ±5%: 0.5A (standby) +12VDC ±5%: 0.1A (for fan)
Operating temperature	0~50°C	0~60°C, (may vary depending upon CPU and Heat Sink)
Humidity	10~90%RH (No condensation)	10~90%RH (No condensation)
Weight	450g	390g
Notes	*1: CF Card slot doesn't have hot-swap function. DO NOT remove or install a CF card while the power is ON. DO NOT turn power off when the system is accessing the CF. These actions can damage the CF. *2: Due to the addition of the CPU and heatsink, cards installed next to the SBC can not be longer than 122mm.	

■ Packing List

GPC-8521-LA / GPC-8520-LA	
Product Guide	1
IDE 40-pin Ribbon Cable	1
IDE 80-pin Ribbon Cable	1
FDD Ribbon Cable	1
Drivers & Utilities (CD-ROM) *	1
Serial port (9-pin D-SUB male x 2) Ribbon Cable (with Bracket)	1
Parallel Port (25-pin D-SUB female x 1) Ribbon Cable (with Bracket)	1
Audio Jack Cable (with Bracket)	1
6-pin mini-DIN Cable (Y Cable)	1

*User's Manual included on CD-ROM.

■ Optional Accessories

GPC-8521-LA / GPC-8520-LA	
CPU with Heatsink [for GPC-8520-LA only]	
GPCPM-16	Pentium M processor 1.6GHz w/Heat sink
GPCPMC-13	Celeron M processor 1.3GHz w/Heat sink
CPU with Heatsink and Fan [for GPC-8520-LA only]	
GPCPM-16F	Pentium M processor 1.6GHz w/Heat sink Fan
GPCPMC-13F	Celeron M processor 1.3GHz w/Heat sink Fan
Cooling Parts [for GPC-8520-LA only]	
Heatsink	Heat sink for GLC-8550-LA, GPC-8520-LA, GPI-8550-LA/LLAS
Heatsink + FAN	Heat sink Fan for GLC-8550-LA, GPC-8520-LA, GPI-8550-LA/LLAS
Memory	
PC-MDD256-184A	DDR SDRAM DIMM(PC2700 256M)
PC-MDD512-184A	DDR SDRAM DIMM(PC2700 512M)
Cable	
USB Connector Cable	USB connector shielded cable
IDE-66 Cable	IDE Ultra ATA 100/66(80-pin Ribbon Cable)

As shown on the side of product's images, RoHS compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

BOARD-PC

PCI Half Size | Chip Set 845GV | Memory Max.1GB DDR SDRAM | USB 2.0 | CF (Option) | SSD (Option) | CE

Middle-size Sibgle Board Computer for PCI

GPC-8450-LA [SPC-8450-LVA]

CPU Option | FAN -less | DVI | Analog RGB | LAN | Audio

- Supports Intel® Pentium® 4 1.7-2.8GHz(FSB400/533MHZ)and Celeron® 1.7-2.6GHz(FSB400MHz), Inter® Celeron® D 2.26-2.8GHz(FSB533MHz)(Socket478)
- Pentium® 4 solution on half-size PCI board
- Supports up to 1GB SDRAM (max)
- Type I / II CF card slot - bootable
- Equipped with DVI-I I/F, easily connects with CONTEC's touch screen LCD displays

Model	GPC-8450-LA
CPU*1	Intel® Pentium® 4 Processor 1.7GHz to 2.8GHz (FSB 400/533MHz) Intel® Celeron® Processor 1.7GHz to 2.6GHz (FSB 400MHz) (Northwood Core only) Intel® Celeron® D Processor 2.8GHz to 2.8GHz (FSB 533MHz)
Cache	Built in CPU
Processor socket	Soket 478
Memory(Option)	1x 200-pin socket, PC2100 (DDR266) SDRAM, up to 1GB
Chipset	Intel® 845GV + ICH4
BIOS	Award BIOS, PnP support
VGA	Built in Intel® 845GV, 1 x DVI connector
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included) 1 x 5pin box-header for external keyboard
Serial I/F	1x 10pin box-header - COM1: RS-232C, 1x 10pin box-header - COM2: RS-232C / 422A / 485
Parallel I/F	1x 26pin box-header
On board expansion bus	-
Wired LAN	100BASE-TX/10BASE-T, Intel® ICH4 1 x RJ-45 connector, Wake On LAN support
IDE I/F	1 x EIDE connectors, Ultra DMA 33/66/100
SATA I/F	-
FDD I/F	1x 34pin box-header, 2 modes
Compact Flash Slot	1x bootable CF card (Type I/II) slot
SSD Socket	-
USB Port	3ch USB2.0-compliant ports, 1 x box-header 10-pin connectors (2ch), 1 x USB type A connectors (1ch)
RAID	-
Audio	AC97 CODEC, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.) Reset when time up
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed
Lithium Battery Life	CR2450 battery / Expected backup time with no power @ 25°C is > 7 yrs
Power Management	Power management setup via BIOS, Modem Ring On/Wake On LAN, Supports PC98/PC99 ACPI Power management
Bus specification / Size	PCI / 223mm (L) × 122mm (H) [8.8 inch × 4.8 inch]
Power consumption (Max.)	[Pentium 4 2.4GHz], +5VDC, 5.40A +12VDC, 6.20A, +5VSB (Stand by), 0.65A
Operating temperature/ Humidity	0~60°C / 10~90%RH (No condensation)
Weight	360g [13.7 oz]
Note	*1: Please visit our website for updated information on supported CPUs.

Packing List

GPC-8450-LA	
Product Guide	1
Drivers & Utilities (CD-ROM) *	1
IDE 80-pin Ribbon Cable	1
FDD Ribbon Cable	1
Serial port Ribbon Cable (with Bracket)	1
Parallel Port Ribbon Cable (with Bracket)	1
Audio Cable (with Bracket)	1
6-pin mini-DIN Cable (Y Cable)	1
DVI-Analog RGB Conversion Adapter	1
+12V power cable	1

*User's Manual included on CD-ROM.

Optional Accessories

GPC-8450-LA	
CPU (with FAN)	
PCP4-24	Pentium 4 2.4GHz *2
PCP4-28S	Pentium 4 2.8GHz *3
PCP4C-20	Celeron 2.0GHz *2
PCP4C-20S	Celeron 2.0GHz *3
Memory (PC2100 SDRAM Non-Parity)	
PC-MDD256-184A	200-pin SO-DIMM DDR (PC2100, 256MB)
PC-MDD512-184A	200-pin SO-DIMM DDR (PC2100, 512MB)
PC-MDD1G-184A	200-pin SO-DIMM DDR (PC2100, 1GB)
CABLE	
USB Connector Cable	USB connector shielded cable

*2: Due to the size of the attached heat sink and fan,three (3) adjacent slots are unusable.
*3: Due to the size of the attached heat sink and fan,only boards that are 122mm or shorter can be used in the adjacent four (4) slots.

5inch Bay Size | Chip Set 855GME | Memory Max.1GB DDR SDRAM | USB 2.0 | CF (Option) | SSD (Option) | CE

5-inch Sibgle Board Computer for Socket 478 (Pentium M) RoHS Compliant

GLC-8550-LA [SLC-8550-LVA]

CPU Option | FAN -less | Analog RGB | LAN | Audio

- Compatible with Intel® Pentium® M 1.6G~2.0GHz, Intel® Celeron® M 1.3G~1.5GHz
- Intel® 855GME+ICH4 chip set
- Supports up to 1GB DDR SDRAM, ECC support
- Features interfaces for Analog RGB, LVDS, EIDE, 6 x serial (RS-232C) ports, and 6 x USB2.0
- Analog RGB and LVDS interfaces supports Dual View
- Type I CF card slot - bootable

Model	GLC-8550-LA
CPU *1 (Option)	Intel® Pentium® M (FSB400MHz) 1.6G to 2.0GHz Intel® Celeron® M (FSB400MHz) 1.3G to 1.5GHz 478-pin µFC-PGA
Cache	Built in CPU
Processor socket	Socket 478
Memory(Option)	1 x 184-pin DIMM socket, PC2700 DDR SDRAM up tp 1GB, ECC support
Chipset	Intel® 855GME+ICH4
BIOS	Award BIOS, PnP support
VGA	Built in Intel® 855GME, 1 x Analog RBG interface (15-pin HD-SUB connector), 1 x LVDS (18bit) interface (1x 20pin and 1x 30pin box-header)
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included) External key board, mouse signal built-in [CN11]
Serial I/F	4x front 9pin D-SUB connectors (RS-232C) 1x 20pin box-header / 2ch RS-232C
Parallel I/F	-
On board expansion bus	PCI slot *1
Wired LAN	100BASE-TX/10BASE-T, Intel ICH4, 1 x RJ-45 connector, Wake On LAN support
IDE I/F	1 x EIDE connectors, Ultra DMA 33/66/100 Secondary port: shared with CF card slot *3
SATA I/F	-
FDD I/F	-
Compact Flash Slot *4	1x bootable CF card (Type II) slot
SSD Socket	-
USB Port	6ch USB 2.0 compliant ports, 6 x USB Type A connectors
RAID	-
Audio	AC97 CODEC, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.) Reset when time up
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed
Lithium Battery Life	>10 years with no power at 25°C
Power Management	Power management setup via BIOS, Modem Ring On/Wake On LAN, Supports PC98/PC99 ACPI Power management
Bus specification / Size	203mm (L) × 145mm (H) [7.99 inch × 5.92 inch]
Power consumption (Max.)	Using Pentium® M 1.6GHz +5VDC: 9.0A / +12VDC: 0.25A (fan) / +5VSB: 1.0A (Stand by)
Operating temperature	0~60°C *5
Humidity	10~90%RH (No condensation)
Weight	360g
Notes	*1: The PCI slot signal pins differ from standard PCI slots. Installed boards CAN NOT use the following signals - A side: A1, A3, A4, A9, A11, A14, A40, A41 / B side: B2, B4, B9, B10, B11, B14, B16, B18. *2: Secondary IDE port cannot be set to UltraDMA/66/100 when CF card is used. *3: Secondary IDE port can only support one drive when CF card is in use. *4: CF card slot does not support hot swap. *5: Dependent upon CPU and heat sink specifications.

■ Packing List

GLC-8550-LA	
Manual	1
Drivers & Utilities (CD-ROM) *	1
IDE 80-pin Ribbon Cable	1
IDE 40-pin Ribbon Cable	1
Combination screw for D-SUB connector	10
6-pin mini-DIN Cable (Y Cable)	1

*User's Manual included on CD-ROM.

■ Options for CPU Board

GLC-8550-LA	
CPU with Heatsink	
GPCPM-16	Pentium M processor 1.6GHz w/Heat sink
GPCPMC-13	Celeron M processor 1.3GHz w/Heat sink
CPU with Heatsink and Fan	
GPCPM-16F	Pentium M processor 1.6GHz w/Heat sink Fan
GPCPMC-13F	Celeron M processor 1.3GHz w/Heat sink Fan
Cooling Parts	
Heatsink	Heat sink for GLC-8550-LA
Heatsink + FAN	Heat sink Fan for GLC-8550-LA
Memory	
PC-MDD256-184A	DDR SDRAM DIMM(PC2700 256M)
PC-MDD512-184A	DDR SDRAM DIMM(PC2700 512M)
PC-MDD1G-184A	DDR SDRAM DIMM(PC2700 1GB)

As shown on the side of product's images, RoHS compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

BOARD-PC

5inch Bay Size | Chip Set 852GM | Memory Max.1GB DDR SDRAM | USB 2.0 | CF (Option) | SSD (Option) | CE

5-inch Sibgle Board Computer with ULV Celeron M

GLC-8521-LA [SLC-8521-LA]

RoHS Compliant

CPU ULV Celeron M 800MHz | FAN -less | Analog RGB | LAN | Audio

- Equipped with 800MHz Ultra Low Voltage Intel Celeron M processor (FSB400MHz)
- Features Intel® 852 GM+ICH4 chipset
- Supports up to 1GB PC2700 DDR SDRAM
- Includes analog RGB, LVDS, EIDE, 6 x serial (RS-232C) ports, 6 x USB2.0, ports, PS/2
- Analog RGB and LVDS interfaces support Dual View
- LVDS interconnects directly with panel-link LCD
- Type I CF card slot - bootable

Model	GLC-8521-LA
CPU	Ultra Low Voltage Intel® Celeron® M Processor 800MHz (FSB400MHz)On board, Fan less
Cache	-
Processor socket	-
Memory(Option)	1x 184-pin DIMM socket, PC2700 DDR SDRAM, up to 1GB,
Chipset	Intel® 852GM + ICH4
BIOS	AWARD BIOS, PnP support
VGA	Built in Intel® 852GM, 1 x Analog RBG interface (15-pin HD-SUB connector), 1 x LVDS (18bit) interface (1x 20pin and 1x 30pin box-header)
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included) External key board, mouse signal built-in [CN11]
Serial I/F	4x front 9pin D-SUB connectors (RS-232C) 1x 20pin box-header / 2ch RS-232C
Parallel I/F	-
On board expansion bus	PCI slot *1
LAN Port	100BASE-TX/10BASE-T, Intel® ICH4, One RJ-45 connector, Wake On LAN support
IDE I/F	1 x EIDE connectors, Ultra DMA 33/66/100*2*3
SATA I/F	-
FDD I/F	-
Compact Flash Slot *4	1x bootable CF card (Type II) slot
SSD Socket	-
USB Port	6ch USB2.0 compliant ports, 6 x USB Type A connectors
RAID	-
Audio	AC97 CODEC, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.) Reset when time up
Hardware Monitor	Monitors CPU and board temperature, power supply voltage
RTC/CMOS	>10 years with no power at 25°C
Power Management	Power management setup via BIOSModem Ring On/Wake On LAN, Supports PC98/PC99 ACPI Power management
Form factor / Dimensions	5.25 inch Little board / 203mm(L) × 145mm(H) [7.99 inch x 5.92 inch]
Power Supply	+5VDC±5%+12VDC±5% (For fan, PCI Slot) +5VSB(Stand by)±5%
Power supply specifications (Max.)	+5VDC: 5.0A +5VSB(Stand by): 1.0A
Operating temperature/Humidity	0~50°C / 10~90%RH (No condensation)
Weight	880g
Notes	*1: The PCI slot signal pins differ from standard PCI slots. Installed boards CAN NOT use the following signals - A side: A1, A3, A4, A9, A11, A14, A40, A41 / B side: B2, B4, B9, B10, B11, B14, B16, B18 *2: Secondary IDE port cannot be set to UltraDMA/66/100 when CF card is used. *3: Secondary IDE port can only support one drive when CF card is in use. *4: CF card slot does not support hot swap.

■ Packing List

GLC-8521-LA	
Board	1
Product Guide	1
IPC Precaution List	1
Drivers & Utilities (CD-ROM) *	1
IDE 80pin Ribbon Cable	1
IDE 40pin Ribbon Cable	1
Screws for D-SUB connector	10
6 pin mini-DIN cable (Y Cable)	1
Jumper cap (2mm)	1

*User's Manual included on CD-ROM.

■ Optional Accessories

GLC-8521-LA	
Memory	
PC-MDD256-184A	DDR SDRAM DIMM(PC2700 256M)
PC-MDD512-184A	DDR SDRAM DIMM(PC2700 512M)
PC-MDD1G-184A	DDR SDRAM DIMM(PC2700 1GB)

As shown on the side of product's images, RoHS compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

BOARD-PC

PICMG 1.3 Half Size | Chip Set: 945GME | Memory: Max. 4GB DDR2 SDRAM | SATA | USB 2.0 | CF (Option) | SSD (Option)

Half-size Single Board Computer for PICMG 1.3

GEH-9450-LAS [SEH-9450-LAS]

NEW

RoHS Compliant

CPU Option | FAN -less | Analog RGB | LAN | Audio

- A system with both PCI Express and PCI slots can be built when used with a PICMG1.3-compliant backplane
- Features Intel® 945GME chipset, using an Intel® Core Duo / Core 2 Duo processor
- Supports up to 4GB DDR2 SDRAM (400/533/667MHz), Memory capacity: 3.1GB
- Interfaces include Analog RGB, LVDS, SDVO, USB2.0×4, SATA×2, 1000BASE-T/100BASE-TX, PS/2 and Audio
- CF card slot (Type I/II) - bootable

Model	GEH-9450-LAS
CPU	Intel® Core Duo / Core 2 Duo (FSB 533/667MHz)
Cache	Built in CPU
Processor socket	Socket M
Memory(Option)	2x 200-pin SO-DIMM socket, DDR2 400/533/667 for up to 4GB *1
Chipset	Intel® 945GME + ICH7M-DH
BIOS	Award BIOS, PnP support
VGA	Built in Intel® 945GME, 1× Analog RGB D-SUB 15pin connector, 1× LVDS(18bit) I/F: 30pin box header, 20pin box header, 1× SDVO I/F (30pin box header) *2
Keyboard / Mouse	1 x PS/2 keyboard / Mouse connector (Y cable included)
Serial I/F	1 x 10pin box-header - COM1: RS-232C, 1 x 10pin box-header - COM2: RS-232C / 422A / 485 Baud rate: 50-115,200bps (programmable)
Parallel I/F	-
On-board expansion bus	Mini PCI
LAN Port	1000BASE-T/100BASE-TX, Intel 82573E controller, One RJ-45 connector*3. Wake On LAN support
IDE I/F	1× EIDE port, 2 IDE devices (max.)*4
SATA I/F	2× Serial ATA 1.0 compliant board
FDD I/F	-
Compact Flash Slot*5	1× CF card(Type I/II) slot, supports IDE slave/master connection, bootable *6
SSD Socket	-
USB Port	3ch USB2.0-compliant ports, 1 x box-header 10-pin connectors (2ch), 1 x USB type A connectors (1ch)
RAID	RAID 0, RAID 1
Audio	AC97 compliant, 1x 10-pin header connector (line-out, line-in, microphone-in)
Watchdog Timer	255 levels (1 - 255Sec.) Reset when time up
Hardware Monitor	Monitors CPU and board temperature, power supply voltage and fan speed
RTC / CMOS	Expected backup time with no power @ 25°C is > 7 yrs
Power Management	Power management setup via BIOS, Supports Modem Ring On/Wake On LAN and PC98/PC99 ACPI Power management
Bus specification / Size	SHB Express TM (PICMG 1.3) / 167.64mm(L) × 126.5mm(H)
Power consumption (Max.)	[Intel® Core TM2 Duo T7200 2.06GHz/667MHz] +12VDC ±5%: 3.0A / +5VSB ±5%: 0.5A
Operating temperature	0~60°C *7
Humidity	10~90%RH (No condensation)
Weight	480g
Notes	*1: Available memory - 3.1GB (max), ECC not supported. *2: Cannot be used simultaneously with PCI-E X16 SDVO board. *3: 1000BASE-T supported by Windows 2000, XP. *4: IDE connection does not support Ultra DMA 66/100 mode when using CF card. *5: CF card does not support Hot Swap function. Do no install or remove card when power is on. Doing so can damage or destroy the CF. *6: IDE connection will only support one drive when using CF. *7: Dependent upon CPU specifications.

■ Optional Accessories

GEH-9450-LAS	
Backplane	
BEH-0611	For use with PICMG1.3-compliant Half-size SBC Slots: PICMG 1.3 ×1, PCI×2, PCI Express X16 ×1, PCI Express X1 ×1

As shown on the side of product's images, RoHS compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

Analog I/O

Intelligent E series

PCI Express

37-pin D-SUB | Analog Input 16ch | Analog Output 1ch | Digital I/O 4/4 | Counter 1ch | E series | High Precisio | High Speed | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

RoHS Compliant

1MS/s 16-bit Multi-function Analog I/O
AIO-161601UE3-PE NEW

- 16M data buffer memory (FIFO or RING buffer)
- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

16ch Multiplexer Sub-Board
ATUH-16A(PCI)
Can add 16 single-ended or 8 differential inputs.

PCI Express

37-pin D-SUB | Analog Input 16ch | Analog Output 1ch | Digital I/O 4/4 | Counter 1ch | E series | High Precisio | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

RoHS Compliant

100kS/s 16-bit Multi-function Analog I/O
AIO-161601E3-PE NEW

- 16M data buffer memory (FIFO or RING buffer)
- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

16ch Multiplexer Sub-Board
ATCH-16A(PCI)
Can add 16 single-ended or 8 differential inputs.

PCI Express

37-pin D-SUB | Analog Input 16ch | Analog Output 1ch | Digital I/O 4/4 | Counter 1ch | E series | High Speed | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

RoHS Compliant

1MS/s 12-bit Multi-function Analog I/O
AIO-121601UE3-PE NEW

- 16M data buffer memory (FIFO or RING buffer)
- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

16ch Multiplexer Sub-Board
ATUH-16A(PCI)
Can add 16 single-ended or 8 differential inputs.

PCI Express

37-pin D-SUB | Analog Input 16ch | Analog Output 1ch | Digital I/O 4/4 | Counter 1ch | E series | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

RoHS Compliant

100kS/s 12-bit Multi-function Analog I/O
AIO-121601E3-PE NEW

- 16M data buffer memory (FIFO or RING buffer)
- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

16ch Multiplexer Sub-Board
ATCH-16A(PCI)
Can add 16 single-ended or 8 differential inputs.

Model		AIO-161601UE3-PE	AIO-161601E3-PE	AIO-121601UE3-PE	AIO-121601E3-PE
Input channels		16 single-ended, 8 differential (Supports up to 32 single-ended, 16 differential input with channel multiplexer sub board)			
Output channels		1ch			
Resolution		16bit		12bit	
Analog Input	Range	Bipolar: ±10V, ±5V;Unipolar: 0~+10V, 0~+5V (jumper selectable)		Bipolar: ±10V, ±5V, ±2.5V; Unipolar: 0~+10V, 0~+5V (jumper selectable)	Bipolar: ±10V, ±5V, ±2.5V, ±1.25V; Unipolar: 0~+10V, 0~+5V, 0~+2.5V, 0~+1.25V (jumper or software selectable)
	Gain	-			
	Conversion Speed	1µsec/ch (Max.)	10µsec/ch (Max.)	1µsec/ch (Max.)	10µsec/ch (Max.)
	Conversion Accuracy *1*2	±5LSB *3	±5LSB *3	±3LSB	±2LSB (at ±10V, ±5V, 0~+10V, 0~+5V Input), ±4LSB (at ±2.5V, ±1.25V, 0~+2.5V, 0~+1.25V input)
	Impedance	1MΩ or more			
Analog Output	Range	Bipolar: ±10V; Unipolar: 0~+10V (jumper selectable)		Bipolar: ±10V, ±5V; Unipolar: 0~+10V (jumper selectable)	
	Rating	±5mA			
	Conversion Speed	10µsec/ch (Max.)		6µsec/ch (Max.)	
	Conversion Accuracy *	±3LSB		±1/2LSB	
	Impedance	1Ω or less			
Trigger		Software command, Input data comparison or External TTL-level Input			
Isolation type		-			
Timer		-			
Digital I/O		4 Non-isolated TTL-level input (Common use or counter input is jumper selectable), 4 Non-isolated TTL-level output (Common use or counter ounput is jumper selectable)			
Interrupts		1 level			
I/O Address		Occupies 32 ports			
Power Consumption (Max.) *4		+3.3V 2000mA	+3.3V 1500mA	+3.3V 1200mA	+3.3V 1500mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)			
Connector		37-pin female D-type Screw Lock #4-40UNC, DCLC-J37SAF-20L9E [JAE] or equivalent 16-pin Pin Header connector, PS-16SEN-D4P1-1C [JAE] or equivalent			
Options	Software	ACX-PAC(W32)			
	Accessories	DTP-3A*5, DTP-4A*5, ATP-16E*5, ATBA-16E*5, FTP-15*6, EPD-37A*5*7, EPD-37*5, ATSS-16A*5*8, ATII-8A*5, ATCH-16A(PCI)*11, ATUH-16A(PCI)*12, DICT-37S*5, DICT-37F*5			
	Cables / Connectors	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, PCC16PS-1.5/3, PCD8PS-1.5/3, PCA15P*9, PCB15P*9*10, DT/E1, DT/E2, CN5-D37M			

Note

*1: If operating temperature becomes close to 0°C or 50°C, ±0.1% LSB non-linearity error may occur.
*2: When using a signal source with a high-speed built-in operational amplifier
*3: An error of about 0.02% of the maximum range value may occur when ±5V bipolar or 0~+5V unipolar input was selected.
*4: The power consumption of the board will exceed if an external device requires supplying of +5VDC from the CN1 or CN2 connectors.
*5: Requires optional cable PCB37Px. (0.5m is recommended)
*6: Requires optional cables DT-E3 and PCB15P
*7: The screw-up teminal block is used, whose screw does not falling off.
*8: External power supply is required.
*9: Requires optional cables DT/E2
*10: PCB15P is a cable for FTP-15 terminal panel.
*11: Only for AIO-161601E3-PE, AIO-121601E3-PE
*12: Only for AIO-161601UE3-PE, AIO-121601UE3-PE.

Attention: Because the user application cannot access(I/O) directly, please use the included driver library or the optional support software.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

PCI Express | 50-pin Mini-Ribbon | Analog Input 8ch | Analog Output 2ch | Digital I/O 4/4 | Counter 1ch | L series | High Precision | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

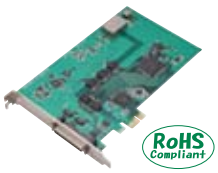
Bus Isolated 16-bit Multi-function Analog I/O

AIO-160802LI-PE NEW

- Isolation between PC signal and external analog / digital signals
- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Can set the output voltage to 0V at power-on forcibly
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board ADAI16-8/2(LPCI)L

PCI Express | 50-pin Mini-Ribbon | Analog Input 16ch | Analog Output - | Digital I/O 4/4 | Counter 1ch | L series | High Precision | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW



Bus Isolated 16-bit Analog Input

AI-1616LI-PE NEW

- Isolation between PC signal and external analog / digital signals
- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board ADI16-16(LPCI)L

PCI Express | Low Profile | 68-pin 0.8mm Pitch | Analog Input 64ch | Analog Output - | Digital I/O 4/4 | Counter 1ch | L series | High Precision | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Multi-channel 16-bit Analog Input

AI-1664LA-LPE NEW

- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board AD16-64(LPCI)LA
- Low Profile PCI - compliant (includes bracket for use in standard PCI slot)

Model		AIO-160802LI-PE	AI-1616LI-PE	AI-1664LA-LPE
Analog Input	Channels	8 single-ended	16 single-ended	64 single-ended, 32 differential
	Range	Bipolar: ±10V		
	Impedance	1MΩ or more		
	Resolution	16bit		
	Conversion Speed	10μsec/ch (Max.)		
	Conversion Accuracy *1*2	±16LSB		±5LSB
	Buffer Memory	1K word		
Analog Output	Channels	2ch	-	
	Range	Bipolar: ±10V	-	
	Impedance	1Ω or less	-	
	Resolution	16bit	-	
	Conversion Speed	10μsec (Max.)	-	
	Conversion Accuracy	±5LSB	-	
	Buffer Memory	1K word	-	
Digital I/O	Input	4 Non-isolated TTL-level input (positive logic)		
	Output	4 Non-isolated TTL-level output (positive logic)		
Counter	Channels	1ch		
	Counting	32-bit Up count		
	Max. count	32-bit (binary data)		
Interrupts		1 level		
I/O Address		Occupies 64 ports		
Power Consumption (Max.)		3.3VDC 820mA	3.3VDC 580mA	3.3VDC 620mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)		PCI Express Base Specification Rev.1.0a ×1 / 121.69(L)×67.90(H)
Connector		10250-52A2JL [3M] or equivalent		68-pin 0.8mm Pitch connector: HDRA-E68W1LFDT-SL [HONDA] or equivalent
Options	Software	ACX-PAC(W32)		
	Accessories	EPD-50A*3*8, ATBA-8L*3*4*5*6, ATBA-16L*3*4*5, ATP-8L*3*7, DICT-50S*3, DICT-50S*3, DICT-50F*3		DTP-64(PC)*9*11, EPD-68A*8*10*11, EPD-96A*8*9*11, EPD-96*9*11, ATP-32F*9*11, ATP-8*9*11*12
	Cables / Connectors	GPCB50PS [PCB50PS] -0.5P/1.5P, PCA50PS-0.5P/1.5P		GPCA68PS [PCA68PS] -0.5P/1.5P, PCB68PS-0.5P/1.5P, ADC-68M/96F

Note

*1: If operating temperature becomes close to 0°C or 50°C, ±0.1% LSB non-linearity error may occur.
*2: When using a signal source with a high-speed built-in operational amplifier
*3: Requires optional cable PCB50PS-0.5P or PCB50PS-1.5P.
*4: Only for AIO-160802L-LPE, AI-1616L-LPE.
*5: Optional AC adapter "POA200-20" is required.
*6: Maximum of 8 analog input channels are available for AI-1616L-LPE.
*7: Maximum of 8 analog input channels and 2 analog output channels available.
*8: The screw-up teminal block is used, whose screw does not falling off.
*9: Requires optional cable ADC-68M/96F.
*10: Requires optional cable PCB68PS-0.5P or PCB68PS-1.5P.
*11: When using both CN1 and CN2 connectors simultaneously, 2 cables and 2 accessory panels are required.
*12: It can be used among CNA chanel 0-7 or CNB channel 32-39.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Analog I/O

Low-cost Multi-function L series

PCI Express

50-pin Mini-Ribbon | Analog Input: - | Analog Output: 4ch | Digital I/O: 4/4 | Counter: 1ch | L series | High Precisio | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Bus Isolated 16-bit Analog Output

AO-1604LI-PE

NEW

- Isolation between PC signal and external analog / digital signals
- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Can set the output voltage to 0V at power-on forcibly
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board DAI16-4(LPCI)L

PCI Express

Low Profile | 50-pin Mini-Ribbon | Analog Input: - | Analog Output: 8ch | Digital I/O: 4/4 | Counter: 1ch | L series | High Precisio | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

100KSPS 16-bit Analog Output

AO-1608L-LPE

NEW

- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board DA16-8(LPCI)L
- Low Profile PCI - compliant (includes bracket for use in standard PCI slot)

PCI Express

Low Profile | 50-pin Mini-Ribbon | Analog Input: - | Analog Output: 16ch | Digital I/O: 4/4 | Counter: 1ch | L series | High Precisio | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

100KSPS 16-bit Analog Output

AO-1616L-LPE

NEW

- The start/end of sampling can be performed by software command, Input data comparison or and external TTL-level Input
- 1K data buffer memory (FIFO or RING buffer)
- Functions, Connector pin and Signal assignment is compatible with the PCI-compliant board DA16-16(LPCI)L
- Low Profile PCI - compliant (includes bracket for use in standard PCI slot)

Model		AO-1604LI-PE	AO-1608L-LPE	AO-1616L-LPE	
Analog Input	Channels	-			
	Range	-			
	Impedance	-			
	Resolution	-			
	Conversion Speed	-			
	Conversion Accuracy *1*2	-			
	Buffer Memory	-			
Analog Output	Channels	4ch	8ch	16ch	
	Range	Bipolar: ±10V			
	Impedance	1Ω or less			
	Resolution	16bit			
	Conversion Speed	10µsec (Max.)			
	Conversion Accuracy	±5LSB			
	Buffer Memory	1K word			
Digital I/O	Input	4 Non-isolated TTL-level input (positive logic)			
	Output	4 Non-isolated TTL-level output (positive logic)			
Counter	Channels	1ch			
	Counting	32-bit Up count			
	Max. count	32-bit (binary data)			
Interrupts		1 level			
I/O Address		Occupies 64 ports			
Power Consumption (Max.)		3.3VDC 1150mA	3.3VDC 240mA, 12VDC 300mA	3.3VDC 280mA, 12VDC 380mA	
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)	PCI Express Base Specification Rev.1.0a ×1 / 121.69(L)×67.90(H)		
Connector		10250-52A2JL [3M] or equivalent			
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-50A*1*2, DICT-50S*1, DICT-50F*1			
	Cables / Connectors	GPCB50PS[PCB50PS]-0.5P/1.5P, PCA50PS-0.5P/1.5P			

Notes

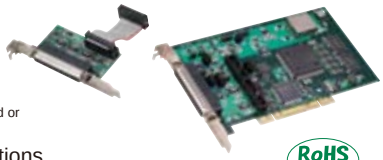
*1: Requires use of optional cable GPCB50PS-0.5P or GPCB50PS-1.5P.
*2: The screw-up teminal block is used, whose screw does not falling off.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

PCI | 37-pin D-SUB | Analog Input 16ch | Analog Onput 1ch | Digital I/O 4 | Counter — | E series | High Speed | Memory on Board | CE

Windows Driver | Linux Diver | C-LOGGER | LabVIEW | MATLAB

16ch Multiplexer Sub-Board
ATUH-16A(PCI)
Can add 16 single-ended or 8 differential inputs



RoHS Compliant

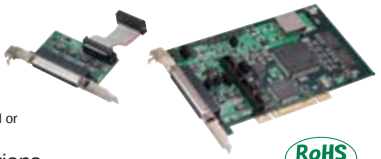
1MS/s 12bit Multi-function Analog I/O
GAD12-16U(PCI)EV
[AD12-16U(PCI)EV]

- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

PCI | 37-pin D-SUB | Analog Input 16ch | Analog Onput 1ch | Digital I/O 4 | Counter — | E series | High Precision | High Speed | Memory on Board | CE

Windows Driver | Linux Diver | C-LOGGER | LabVIEW | MATLAB

16ch Multiplexer Sub-Board
ATUH-16A(PCI)
Can add 16 single-ended or 8 differential inputs



RoHS Compliant

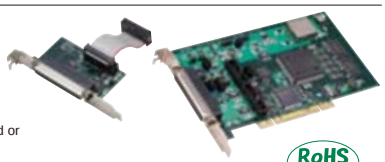
1MS/s 16bit Multi-function Analog I/O
GAD16-16U(PCI)EV
[AD16-16U(PCI)EV]

- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

PCI | 37-pin D-SUB | Analog Input 16ch | Analog Onput 1ch | Digital I/O 4 | Counter — | E series | Memory on Board | CE

Windows Driver | Linux Diver | C-LOGGER | LabVIEW | MATLAB

16ch Multiplexer Sub-Board
ATCH-16A(PCI)
Can add 16 single-ended or 8 differential inputs



RoHS Compliant

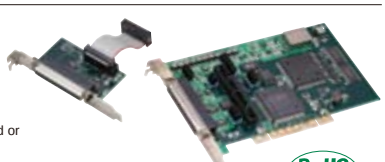
100kS/s 12bit Multi-function Analog I/O
GAD12-16(PCI)EV
[AD12-16(PCI)EV]

- A variety of accessories can extend functions
- The start/end of sampling can be performed by software command, Input data comparison or external TTL-level Input
- Features software-based calibration function

PCI | 37-pin D-SUB | Analog Input 16ch | Analog Onput 1ch | Digital I/O 4 | Counter — | E series | High Speed | Memory on Board | CE

Windows Driver | Linux Diver | C-LOGGER | LabVIEW | MATLAB

16ch Multiplexer Sub-Board
ATCH-16A(PCI)
Can add 16 single-ended or 8 differential inputs



RoHS Compliant

100kS/s 16bit Multi-function Analog I/O
GAD16-16(PCI)EV
[AD16-16(PCI)EV]

- A variety of accessories can extend functions
  The start/end of sampling can be performed by software command,
- Input data comparison or external TTL-level Input
  Features software-based calibration function

Model		GAD12-16U(PCI)EV	GAD16-16U(PCI)EV	GAD12-16(PCI)EV	GAD16-16(PCI)EV
Input channels		16 single-ended, 8 differential (Supports up to 32 single-ended, 16 differential input with channel multiplexer sub board)			
Output channels		1ch			
Resolution		12bit	16bit	12bit	16bit
Analog Input	Range	±10V, ±5V, ±2.5V, 0~+5V, 0~+10V (jumper selectable)	±10V, ±5V, 0~+10V, 0~+5V (jumper selectable)	±10V, 0~+10V	±10V, ±5V, ±2.5V, 0~+5V, 0~+10V (jumper selectable)
	Gain	-		×1, ×2, ×4, ×8	-
	Conversion Speed	1µsec/ch (Max.)		10µsec/ch (Max.)	
	Conversion Accuracy *3	±3LSB*1	±5LSB*1*4	±2LSB (at ±10V, ±5V, 0~+10V, 0~+5V, Input), ±4LSB (at ±2.5V, ±1.25V, 0~+2.5V, 0~+1.25V input)	±5LSB*1*2*3
Impedance		1MΩ or more			
Analog Output	Range	±10V, ±5V, 0~+10V (jumper selectable)	±10V, 0~+10V (jumper selectable)	±10V, ±5V, 0~+10V	±10V, 0~+10V (jumper selectable)
	Rating	±5mA			
	Conversion Speed	6µsec (Max.)	10µsec (Max.)	6µsec (Max.)	10µsec (Max.)
	Conversion Accuracy	±1/2LSB*1	±3LSB*1	±1/2LSB*1	±3LSB*1
	Impedance	1Ω or less			-
Trigger		Software command, Input data comparison or External TTL-level Input			
Isolation type		-			
Timer		-			
Digital I/O		4 Non-isolated TTL-level input (Common use or counter input is jumper selectable), 4 Non-isolated TTL-level output (Common use or counter ounput is jumper selectable)			
Interrupts		1 level			
I/O Address		Occupies 32 ports			
Power Consumption (Max.) *4		5VDC 1000mA			
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*5) / 176.41(L)×105.68(H)			
Connector		CN1(AIO): 37pin female D-type Screw Lock #4-40UNC, DCLC-J37SAF-20L9E [JAE] or equivalent, CN2(DIO)16pin box header connector, PS-16SEN-D4P1-1C [JAE] or equivalent			
Options	Software	ACX-PAC(W32)			
	Accessories	DTP-3A*5, DTP-4A*5, ATP-16E*5, ATBA-16E*5, FTP-15*6, EPD-37A*5*7, EPD-37*5, ATSS-16A*5*8, ATII-8A*5, ATCH-16A(PCI)*11, ATUH-16A(PCI)*12, DICT-37S*5, DICT-37F*5			
	Cables / Connectors	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, PCC16PS-1.5/3, PCD8PS-1.5/3, PCA15P*9, PCB15P*9*10, DT/E1, DT/E2, CN5-D37M			

Notes

*1: If operating temperature becomes close to 0ºC or 50ºC, ±0.1% LSB non-linearity error may occur.
*2: When using a signal source with a high-speed built-in operational amplifier
*3: An error of about 0.02% of the maximum range value may occur when ±5V bipolar or 0~+5V unipolar input was selected.
*4: The power consumption of the board will exceed if an external device requires supplying of +5VDC from the CN1 or CN2 connectors.
*5: Requires optional cable PCB37Px. (0.5m is recommended)
*6: Requires optional cables DT-E3 and PCB15P
*7: The screw-up teminal block is used, whose screw does not falling off.
*8: External power supply is required.
*9: Requires optional cables DT/E2
*10: PCB15P is a cable for FTP-15 terminal panel.
*11: Only for GAD16-16(PCI)EV, GAD12-16(PCI)EV
*12: Only for GAD16-16U(PCI)EV, GAD12-16U(PCI)EV.

As shown on the side of product's images, RoHS Compliant (RoHS Compliant) is a CONTEC original marking for RoHS-compliant products.

Analog I/O

Standard

PCI

37-pin D-SUB | Analog Input 16ch | Analog Output 2ch | Digital I/O 4/4 | Counter 1ch | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Multi-function Analog I/O with High Gain Amplifier

GAIO-121602AH-PCI
[AIO-121602AH-PCI]

- The various setting of input range enables the high-precision measurement
- 1K data buffer memory (FIFO or RING buffer)
- Digital filtering function to prevent input error caused by external signal chattering
- Features software-based calibration function

PCI

37-pin D-SUB | Analog Input 16ch | Analog Output 2ch | Digital I/O 4/4 | Counter 1ch | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Multi-function Analog I/O with Gain Amplifier

GAIO-121602AL-PCI
[AIO-121602AL-PCI]

- The various setting of input range enables the high-precision measurement
- 1K data buffer memory (FIFO or RING buffer)
- Digital filtering function to prevent input error caused by external signal chattering
- Features software-based calibration function

PCI

37-pin D-SUB | Analog Input 16ch | Digital I/O 4/4 | Counter 1ch | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Analog Input with High Gain Amplifier

GAI-1216AH-PCI
[AI-1216AH-PCI]

- The various setting of input range enables the high-precision measurement
- 1K data buffer memory (FIFO or RING buffer)
- Digital filtering function to prevent input error caused by external signal chattering
- Features software-based calibration function

PCI

37-pin D-SUB | Analog Input 16ch | Digital I/O 4/4 | Counter 1ch | Memory on Board

Windows Driver | Linux Driver | C-LOGGER | MATLAB | LabVIEW

Analog Input with Gain Amplifier

GAI-1216AL-PCI
[AI-1216AL-PCI]

- High-precision measurement can be achieved by various setting of input range
- 1K data buffer memory (FIFO or RING buffer)
- Digital filtering function to prevent input error caused by external signal chattering
- Features software-based calibration function

Model		GAIO-121602AH-PCI	GAIO-121602AL-PCI	GAI-1216AH-PCI	GAI-1216AL-PCI
Analog Input	Channels	16 single-ended			
	Range	Bipolar: ±10V, ±1V, ±0.1V, ±0.01V; Unipolar: 0~+10V, 0~+1V, 0~+0.1V, 0~+0.01V	Bipolar: ±10V, ±5V, ±2.5V, ±1.25V; Unipolar: 0~+10V, 0~+5V, 0~+2.5V, 0~+1.25V	Bipolar: ±10V, ±1V, ±0.1V, ±0.01V; Unipolar: 0~+10V, 0~+1V, 0~+0.1V, 0~+0.01V	Bipolar: ±10V, ±5V, ±2.5V, ±1.25V; Unipolar: 0~+10V, 0~+5V, 0~+2.5V, 0~+1.25V
	Impedance	1MΩ or more			
	Resolution	12bit			
	Conversion Speed	150µsec/ch (Max.)	10µsec/ch (Max.)	150µsec/ch (Max.)	10µsec/ch (Max.)
	Conversion Accuracy *3*4	±2LSB (±10V, ±1V, 0~+10V, 0~+1V), ±5LSB (±0.1V, 0~+0.1V), ±10LSB (±0.01V, 0~+0.01V)	±2LSB (±10V, ±5V, 0~+10V, 0~+5V), ±3LSB (±2.5V, 0~+2.5V), ±5LSB (±1.25V, 0~+1.25V)	±2LSB (±10V, ±1V, 0~+10V, 0~+1V), ±5LSB (±0.1V, 0~+0.1V), ±10LSB (±0.01V, 0~+0.01V)	±2LSB (±10V, ±5V, 0~+10V, 0~+5V), ±3LSB (±2.5V, 0~+2.5V), ±5LSB (±1.25V, 0~+1.25V)
	Buffer Memory	1K word			
Analog Output	Channels	2ch		-	
	Range	Bipolar: ±10V		-	
	Impedance	1Ω or less		-	
	Resolution	12bit		-	
	Conversion Speed	10µsec (Max.)		-	
	Conversion Accuracy *1	±1LSB		-	
	Buffer Memory	1k-word		-	
Digital I/O	Input	4 Non-isolated TTL-level input (positive logic)			
	Output	4 Non-isolated TTL-level output (positive logic)			
Counter	Channels	1ch			
	Counting	32-bit Up count			
	Max. count	32-bit (binary data)			
Interrupts		1 level			
I/O Address		Occupies 64 ports			
Power Consumption (Max.)		5VDC 600mA		5VDC 450mA	5VDC 400mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz or 3.3V*3) / 176.41(L)×105.68(H)			
Connector		CN1(AIO): 37-pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent CN2(DIO): Box Header 30-pin, PS-30PE-D4TIPNI [JAE] or equivalent			
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-37A*5*6, EPD-37*5, DTP-3A*5, DTP-4A*5, DICT-37S*5, DICT-37F*5			
	Cables / Connectors	PCA37P-1.5, PCA37PS-0.5P/1.5P, PCB37P-1.5, PCB37PS-0.5P/1.5P, CN5-D37M			
Note		*1: If operating temperature becomes close to 0°C or 50°C, ±0.1% LSB non-linearity error may occur. *2: When using a signal source with a high-speed built-in operational amplifier. *3: This board requires +5V power supply from an expansion slot (it does not work on a machine with a +3.3V power supply only). *4: Accuracy value of bipolar setting. When unipolar setting applied, the value becomes twice. *5: Requires optional cable PCB37Px. (0.5m is recommended) *6: The screw-up teminal block is used, whose screw does not falling off.			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

PCI — 37-pin D-SUB — Analog Input 16ch — Digital I/O 8/8 — Windows Driver

Uni-polar 12bit Analog Input
GAI-1216B-RU1-PCI
[AI-1216B-RU1-PCI]

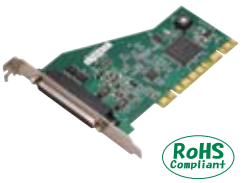
NEW

- Analog input: 0~10V range, 16 12-bit single end, 20µsec/ch conversion speed
- Perform AD conversion at each software command
- 8 TTL-level digital input, 8 TTL-level digital output
- Windows Driver Library bundled

PCI — 37-pin D-SUB — Analog Input 16ch — Digital I/O 8/8 — Windows Driver

Bi-polar 12bit Analog Input
GAI-1216B-RB1-PCI
[AI-1216B-RB1-PCI]

NEW



- Analog input: ±10V range, 16 12-bit single end, 20µsec/ch conversion speed
- Perform AD conversion at each software command
- 8 TTL-level digital input, 8 TTL-level digital output
- Windows Driver Library bundled

PCI — 37-pin D-SUB — Analog Input 4ch — Individual Isolated — High Precision — Windows Driver — Linux Driver

Individual Isolated Analog Input
AI-1604CI2-PCI

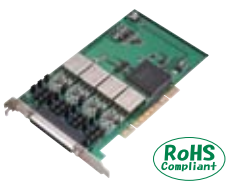
NEW

- Individual isolation among the bus lines to PCs, the channels with photocouplers, and even between the signals of the both
- The start/stop of sampling can be performed at arbitrary fixed intervals by software command or the internal sampling clock on the board or an external sampling clock signal

PCI — 37-pin D-SUB — Analog Output 4ch — Individual Isolated — High Precision — Windows Driver — Linux Driver

Individual Isolated Analog Ouput
AO-1604CI2-PCI

NEW



- Individual isolation among the bus lines to PCs, the channels with photocouplers, and even between the signals of the both
- Digital signals of the specified channel or all the channels can be converted to analog voltages simultaneously
- The start/stop of sampling can be performed at arbitrary fixed intervals by software command or the internal sampling clock on the board or an external sampling clock signal

Model		GAI-1216B-RU1-PCI	GAI-1216B-RB1-PCI	AI-1604CI2-PCI	AO-1604CI2-PCI
Input channels		16 single-ended		4 single-ended	-
Output channels		-			4ch
Resolution		12bit		16bit	
Analog Input	Range	Unipolar: 0~+10V	Bipolar: ±10V	Bipolar: ±10V, ±5V; Unipolar: 0~+10V, 0~+5V; 4~20mA (Input range can be set by both jumper and software)	-
	Gain	-			
	Conversion Speed	20µsec/ch (Max.)			-
	Conversion Accuracy *1*2	±3LSB		±32LSB (±10V), ±64LSB (0~+10V, ±5V), ±64LSB (0~+5V), ±80LSB (4~20mA)	-
	Impedance	1MΩ or more		1MΩ or more (Voltage input, Power on) 1kΩ or more (Voltage input, Power off)	-
Analog Output	Range	-			Bipolar: ±10V; Unipolar: 0~+10V; 0~20mA (jumper setting per channel)
	Rating	-			±5mA (Voltage output) ±10V, 0~+10V, 500Ω (Current output)
	Conversion Speed	-			20µsec (Max.)
	Conversion Accuracy	-			±5LSB (±10V, 0~+10V), ±15LSB (0~20mA)
	Impedance	-			10Ω or less
External trigger signal		-		Opto-Isolated input (for sink current output)	
Start trigger		Software command		Software command, External trigger	-
Stop trigger		-		End-count, External trigger, Software command	-
Isolation type		-		Channel isolation	Individual isolation
Timer		-		500~1,073,741,824,000 nsec (selectable in 250nsec intervals)	
Digital I/O		8 TTL-level output (positive logic), 8 TTL-level input (positive logic)		-	
Interrupts		1 level			
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		+5V 200mA		+5V 1100mA	+5V 2400mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz or 3.3V*3) / 121.69(L)×88.00(H)		PCI (32bit, 33MHz or 3.3V*3) / 176.41(L)×106.68(H)	
Connector		37-pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent			
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-37A*4*5, EPD-37*4, DTP-3A*4, DTP-4A*4			
	Cables / Connectors	PCA37P-1.5, PCA37PS-0.5P/1.5P, PCB37P-1.5, PCB37PS-0.5P/1.5P, CN5-D37M			

Note

*1: If operating temperature becomes close to 0°C or 50°C, ±0.1% LSB non-linearity error may occur.
*2: When using a signal source with a high-speed built-in operational amplifier (only for AI-1216B-RB1-PCI, AI-1216B-RU1-PCI)
*3: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only).
*4: Requires optional cable PCB37P-1.5 or PCB37PS-0.5P/1.5P
*5: The screw-up teminal block is used, whose screw does not falling off.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Analog I/O

Standard

PCI | BNC | Analog Input 4ch | Analog Output - | Digital I/O 4/4 | Counter - | High-speed Conversion | Memory on Board | Simultaneous Sampling | Windows Driver

10MS/s 12-bit Analog Input

AI-1204Z-PCI

NEW

- 4ch simultaneous sampling at maximum conversion speed of 10MS/s(100nsec) per channel
- Synchronous Control Connectors supports the synchronous operation of multiple boards
- Mass buffer memory (32M Word) and the Bus Master Transfer function enables High-speed and long-time continuous data collection
- Features BNC connectors for the analog input terminal

Model		AI-1204Z-PCI
Analog Input	Channels	4 single-ended
	Range	[When 50Ω terminal setting disabled] Bipolar: ±10V, ±5V, ±2.5V, ±1.25V; Unipolar: 0~+10V, 0~+5V, 0~+2.5V [When 50Ω terminal setting enabled] Bipolar: ±5V, ±2.5V, ±1.25V; Unipolar: 0~+5V, 0~+2.5V
	Impedance	1MΩ or more, 50Ω ±1% (when 50Ω terminal setting)
	Resolution	12bit
	Conversion Speed	100nsec (Max.)
	Conversion Accuracy*1*2*4	±4LSB (±10V), ±6LSB (0~+10V, ±5V), ±8LSB (0~+5V, ±2.5V), ±10LSB (0~+2.5V, ±1.25V)
	Buffer Memory	32M word
Digital I/O	Input	4 Non-isolated TTL-level input (positive logic)
	Output	4 Non-isolated TTL-level output (positive logic)
Counter	Channels	-
	Counting	-
	Max. count	-
Interrupts		Error & each events, 1 interrupt request signal as INTA
I/O Address		Occupies 1 x 64 ports and 1 x 256 ports
Power Consumption (Max.)		5VDC 2500mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz or 3.3V*3) / 176.41(L)×105.68(H)
Connector		CN1(AIO): BNC connector, DB-414K [INSERT ENTERPRISE] or equivalent; CN2(DIO): 16pin box-header connector
Options	Software	-
	Accessories	FTP-15 *4
	Cables / Connectors	For Analog: BNC-B100, BNC-B200, BNC-B300; For Digital: DT-E3, DT/E1, PCA15P-1.5*5, PCB15P-1.5*5*6

Notes

*1: If operating temperature becomes close to 0ºC or 50ºC, ±0.1% LSB non-linearity error may occur.
*2: When using a signal source with a high-speed built-in operational amplifier
*3: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only).
*4: Requires optional cables DT/E3 and PCB15P-1.5.
*5: Optional cables DT/E3 is reuired.
*6: PCB15P is a cable for FTP-15 terminal panel.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

■Related Products of G series

MODEL No.	Equivalent Model	Description
GADA16-8/2(LPCI)L	ADA16-8/2(LPCI)L	8 Ch / 16-bit Multi-function board for Low-Profile PCI
GADAI16-8/2(LPCI)L	ADAI16-8/2(LPCI)L	8 Ch / 16-bit Isolated Multi-function board for Low-Profile PCI
GADI16-4(FIT)GY	ADI16-4(FIT)GY	4 Ch / 16-bit Bus Isolated Analog Input F&eIT module
GAI-1608AY-USB	AI-1608AY-USB	8 Ch / 16-bit USB Analog Input terminal
GAIO-160802AY-USB	AIO-160802AY-USB	8 Ch / 16-bit USB Analog I/O terminal
GDAI16-4(FIT)GY	DAI16-4(FIT)GY	4 Ch / 16-bit Isolated Analog Output module for F&eIT
GPTI-4(USB)	PTI-4(USB)	4 Ch PT100 USB Temeprature Sensor Input terminal

PCI Express | 37-pin D-SUB | Input 16 | Output 16 | Isolated | High Voltage | Digital Filter | Surge & Overcurrent Protection
Windows Driver | Linux Driver | LabVIEW

High-Voltage Opto-Isolated Digital I/O

GDIO-1616H-PE
[DIO-1616H-PE]

NEW

- 16 opto-isolated input , 16 opto-insolated open collector output
- All input points can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Output transistor has built-in circuit protection (voltage surge, zener diode, polyswitch)
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-16/16H(PCI)H

PCI Express | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | High Voltage | Digital Filter | Surge & Overcurrent Protection
Windows Driver | Linux Driver | LabVIEW

High-Voltage Opto-Isolated Digital I/O

GDIO-3232H-PE
[DIO-3232H-PE]

NEW

- 32 opto-isolated input , 32 opto-insolated open collector output
- All input points can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Output transistor has built-in circuit protection (voltage surge, zener diode, polyswitch)
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-32/32H(PCI)H

PCI Express | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Negative Common | Digital Filter | Surge & Overcurrent Protection
Windows Driver | Linux Driver | LabVIEW

Negative-Common Opto-Isolated Digital I/O

GDIO-1616RL-PE
[DIO-1616RL-PE]

NEW

- 16 opto-isolated input , 16 opto-insolated output
- All input points can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board GPIO-16/16RL(PCI)H

PCI Express | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Negative Common | Digital Filter | Surge & Overcurrent Protection
Windows Driver | Linux Driver | LabVIEW

Negative-Common Opto-Isolated Digital I/O

GDIO-3232RL-PE
[DIO-3232RL-PE]

NEW

- 32 opto-isolated input , 32 opto-insolated output
- All input points can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Output transistor has built-in circuit protection (voltage surge, zener diode, polyswitch)
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board GPIO-32/32RL(PCI)H

Model		GDIO-1616H-PE	GDIO-3232H-PE	GDIO-1616RL-PE	GDIO-3232RL-PE
Input channels		16 (all available for interrupts) (1 common)	32 (all available for interrupts) (1 common every 16 channels)	16 (all available for interrupts) (1 common)	32 (all available for interrupts) (1 common every 16 channels)
Output channels		16 (1 common)	32 (1 common every 16 channels)	16 (1 common)	32 (1 common every 16 channels)
Input specifications	Type	Opto-Isolated (for sink current output) (Negative logic)		Opto-Isolated (for source current output) (Negative logic)	
	Signal Level	24 ~ 48VDC (±10%)		12 ~ 24VDC (±10%)	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA
	Resistance	15kΩ		4.7kΩ	
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type) (Negative logic)		Opto-Isolated Open Collector (Current sourcing type) (Negative logic)	
	Rating	60VDC 100mA (per channel)		35VDC 100mA (per channel)	
Response Time (Max.)		within 200µsec			
Internal Power		-			
Wiring Distance		50m (depending on wiring environment)			
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		3.3VDC 310mA	3.3VDC 400mA	3.3VDC 350mA	3.3VDC 400mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)	PCI Express Base Specification Rev. 1.0a ×1 / 169.33(L)×110.18(H)	PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)	PCI Express Base Specification Rev. 1.0a ×1 / 169.33(L)×110.18(H)
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent	37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-37A*1*2, EPD-37*1, DTP-3A*1, DTP-4A*1, DICT-37S*1, DICT-37F*1	EPD-96A*2*3, EPD-96*3, DTP-64(PC)*3,EPD-37A*2*3, EPD-37*4, DTP-3A*4, DTP-4A*4, CCB-96*3, DICT-37S*4, DICT-37F*4, DICT-96S*3, DICT-96F*3	EPD-37A*1*2, EPD-37*1, DTP-3A*1, DTP-4A*1, DICT-37S*1, DICT-37F*1	EPD-96A*2*3, EPD-96*3, DTP-64(PC)*3,EPD-37A*2*4, EPD-37*4, DTP-3A*4, DTP-4A*4, CCB-96*3, DICT-37S*4, DICT-37F*4, DICT-96S*3, DICT-96F*3
	Cables / Connectors	PCA37P, PCB37P, PCB37PS, PCA37PS, CN5-D37M	PCA96P, GPCB96PS[PCB96PS], PCB96P, PCA96PS, GPCB96WS[PCB96WS], CN5-H96F	PCA37P, PCB37P, PCB37PS, PCA37PS, CN5-D37M	PCA96P, GPCB96PS[PCB96PS], PCB96P, PCA96PS, GPCB96WS[PCB96WS], CN5-H96F
Notes		*1: Requires optional cable PCB37P or PCB37PS. *2: The screw-up teminal block is used, whose screw does not falling off. *3: Requires optional cable PCB96P or GPCB96PS[PCB96PS]. *4: Requires optional cable GPCB96WS[PCB96WS].			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

PCI Express

37-pin D-SUB | Input 16 | Output 16 | Isolated | High Voltage | Digital Filter | Non-Polar

Windows Driver | Linux Driver

High-voltage Non-polar Opto-Isolated I/O

DIO-1616RY-PE

NEW

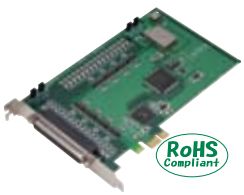
- 16 opto-isolated input (for both current sink and current source output), 16 solid state relay output
- Supports high-voltage input range: 12 to 48VDC, output: 120VAC/VDC
- All input signals can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-16/16RY(PCI)

RoHS Compliant

PCI Express

37-pin D-SUB | Input 32 | Isolated | Power On Board | Digital Filter

Windows Driver | Linux Driver | LabVIEW



Opto-Isolated Digital Input with On-board 12V Power Supply

GDI-32B-PE
[DI-32B-PE]

NEW

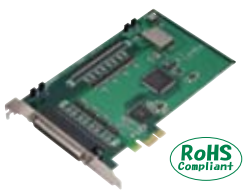
- 32 opto-isolated input (for sink current output)
- On-board battery (12VDC 240mA) to drive the input circuit photocoupler
- All input points can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PI-32B(PCI)H

RoHS Compliant

PCI Express

37-pin D-SUB | Output 32 | Isolated | Power On Board | Digital Filter | Surge & Overcurrent Protection

Windows Driver | Linux Driver | LabVIEW



Opto-Isolated Digital Output with On-board 12V Power Supply

GDO-32B-PE
[DO-32B-PE]

NEW

- 32 opto-isolated open collector output (Current sinking type)
- On-board battery (12VDC 240mA) to drive the input circuit photocoupler
- Output transistor has built-in circuit protection (voltage surge, zener diode, polyswitch)
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PO-32B(PCI)H

RoHS Compliant

Model		DIO-1616RY-PE	GDI-32B-PE	GDO-32B-PE
Input channels		16 (all available for interrupts)	32 (all available for interrupts) (1 common every 16 channels)	-
Output channels		16 (1 common)	-	16 (all available for interrupts)
Input specifications	Type	Opto-Isolated (for sink current output / current source output)	Opto-Isolated (for sink current output) (Negative logic)	-
	Signal Level	12 ~ 24VDC (±10%) or 24 ~ 48VDC (±10%)	12 ~ 24VDC (±10%)	-
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA	-
	Resistance	3kΩ<12~24VDC>, 6kΩ<24~48VDC>	4.7kΩ	-
Output specifications	Type	Solid state Relay	-	Opto-Isolated Open Collector (Current sinking type) (Negative logic)
	Rating	120V AC/DC 100mA	-	35VDC 100mA (per channel)
Response Time (Max.)		Input: 200µsec, Output: 1.0msec	within 200µsec	
Internal Power		-	12VDC 240mA	
Wiring Distance		50m (depending on wiring environment)		
I/O Address		Occupies 32 ports		
Power Consumption (Max.)		5VDC 550mA	Internal: 3.3VDC 350mA, 12VDC 350mA; External: 3.3VDC 350mA	Internal: 3.3VDC 380mA, 12VDC 350mA; External: 3.3VDC 380mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev. 1.0a ×1 / 169.33(L)×110.18(H)		
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent		
Options	Software	ACX-PAC(W32)		
	Accessories	EPD-37A*1*2, EPD-37*1, DTP-3A*1, DTP-4A*1, CM-32(PC)E*1, DICT-37S*1, DICT-37F*1		
	Cables / Connectors	PCB37P, PCB37PS, PCA37P, PCA37PS, CN5-D37M		
Notes		*1: Requires use of optional cable PCB37P or PCB37PS. *2: The screw-up teminal block is used, whose screw does not falling off.		

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

PCI Express | 37-pin D-SUB | Output 16 | Isolated | High Voltage | Non polarity | Windows Driver | Linux Driver

Reed Relay Output Board
RRY-16C-PE

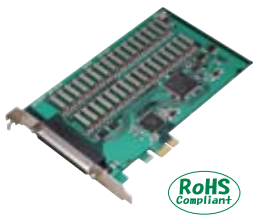
NEW

- 16 individual common reed relay outputs
- Output ratings: up to 125VAC/30VDC - 2A / channel
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board GRRY-16C2-PCI & RRY-16C(PCI)H

PCI Express | 37-pin D-SUB | Output 32 | Isolated | High Voltage | Non polarity | Windows Driver | Linux Driver

Reed Relay Output Board
RRY-32-PE

NEW



- 32 reed relay outputs
- Output ratings: up to 100VAC/VDC and 500mA per channel, 1A per common (max) for total of 8 points and 10VA (10W)
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board RRY-32(PCI)H

Model		RRY-16C-PE	RRY-32-PE	
Input channels		-		
Output channels		16	32	
I/O channels		-		
Input specifications	Type	-		
	Signal Level	-		
	Interrupts	-		
	Resistance	-		
Output specifications	Type	Reed Relay Contact (1-make contact)		
	Rating	-		
	Maximum Power	125V(Max.) *1*2	100V(DC)	
	Maximum Switching Current	2A	0.5A	
	Contact Resistance	30mΩ or less	150mΩ or less	
	Life Expectancy	Min. 20 million times (Swithing Freq. 180 times/min)	Min. 200 million times	
Response Time (Max.)		7msec	1msec	
Internal Power		-		
Wiring Distance		-		
I/O Address		Occupies 32 ports		
Power Consumption (Max.)		3.3VDC 1100mA	3.3VDC 900mA	
Bus / Dimensions (mm)		PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×110.18(H)	PCI Express Base Specification Rev. 1.0a ×1 / 169.33(L)×110.18(H)	
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent		
Options	Software	ACX-PAC(W32)		
	Accessories	EPD-37A*1*2, EPD-37*1, DTP-3A*1, DTP-4A*1, DICT-37S*1, DICT-37F*1		
	Cables/Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M		
Notes		*1: Requires optional cable PCB37P or PCB37PS. *2: The screw-up teminal block is used, whose screw does not falling off.		

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

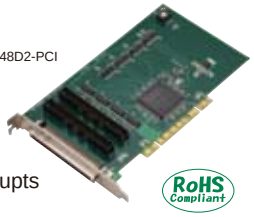
PCI & PCI Express

96-pin Half Pitch | Bi-direct 48 | Non-isolated | Digital Filter | Windows Driver | Linux Driver

Bi-Directional Digital I/O

GDIO-48D2-PCI
[DIO-48D2-PCI]
GDIO-48D-PE
[DIO-48D-PE]

NEW


GDIO-48D2-PCI

- 48-point (TTL-level, Positive logic) bi-directional digital I/O, i8255 Mode 0-compatible
- All input signals (Max. 48 points) can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Driver library for Windows/Linux is provided
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-48D(PCI)

PCI & PCI Express

Low Profile | 68-pin 0.8mm Pitch | Bi-direct 96 | Non-isolated | Digital Filter | Windows Driver | Linux Driver

Bi-Directional Digital I/O

GDIO-96D2-LPCI
[DIO-96D2-LPCI]
GDIO-96D-LPE
[DIO-96D-LPE]

NEW

GDIO-96D2-LPCI

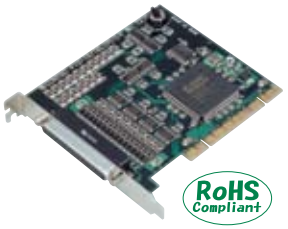
- Low Profile PCI-compliant (includes bracket for use in standard PCI slot)
- 96-point (TTL-level, Positive logic) two-way digital I/O i8255 Mode 0-compliant
- All input signals (Max. 96 points) can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Driver library for Windows/Linux is provided

Model		GDIO-48D2-PCI	GDIO-48D-PE	GDIO-96D2-LPCI	GDIO-96D-LPE
Input channels		-			
Output channels		-			
I/O channels		48		96	
Input specifications	Type	TTL-level (Positive logic)			
	Signal Level	5VDC			
	Interrupts	48 interrupt signals combine to one interrupt request signal as INTA		96 interrupt signals combine to one interrupt request signal as INTA	
	Resistance	Pull-up 10kΩ		-	
Output specifications	Type	TTL-level (Positive logic)			
	Rating	5VDC IOL=24mA, IOH=-15mA			
Response Time (Max.)		200nsec			
Internal Power		-			
Wiring Distance		1.5m (depending on wiring environment)			
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		5VDC 600mA	3.3VDC 1000mA (Max.)	5VDC 950mA	3.3VDC 300mA (Max.)
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L)×106.68(H)	PCI Express Base Specification Rev. 1.0a x1 169.33 (L) x 110.18(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L)×63.41(H)	PCI Express Base Specification Rev. 1.0a x1 121.69(L) x 67.90(H)
Connector		CN1: 96pin female half-pitch PCR-96LMD [HONDA Tsushin Kogyo] or equivalent CN2, CN3: 50pin box header connector PS-50PE-D4T1-B1A[JAE] or equivalent		68-pin 0.8mm pitch: HDRA-E68W1LFDT+ [HONDA Tsushin Kogyo] or equivalent	
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-96A*2*5, EPD-96*2, DTP-64(PC)*2, DICT-96S*2, DICT-96F*2		EPD-96A*3*5, EPD-96*3, DTP-64(PC)*3, EPD-68A*4*5, DICT-96S*3, DICT-96F*3	
	Cables / Connectors	PCB96P-1.5, GPCB96PS[PCB96PS]-0.5P/1.5P, PCA96P-1.5P, PCA96PS-0.5P/1.5P, PCA50J-1.5, CN5-H96F		GPCA68PS [PCA68PS] -0.5P/1.5P, PCB68PS-0.5P/1.5P, DIO-68M/96F	
Notes		*1: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only). *2: Requires optional cable PCB96P or GPCB96PS[PCB96PS]. *3: Requires optional cable DIO-68M/96F. *4: Requires optional cable PCB68PS-0.5P or PCB68PS-1.5P. *5: The screw-up teminal block is used, whose screw does not falling off.			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

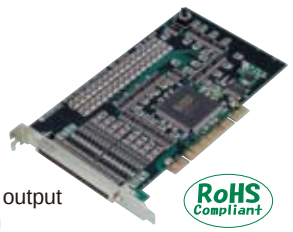
PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Driver | LabVIEW



Opto-Isolated Digital I/O
GDIO-1616L2-PCI
[PIO-16/16L(PCI)H]

- 16 opto-isolated input, 16 opto-isolated open collector output
- Fast response time (within 200µsecs.) / Power saving design
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Driver | LabVIEW



Opto-Isolated Digital I/O
GDIO-3232L2-PCI
[PIO-32/32L(PCI)H]

- 32 opto-isolated input, 32 points opto-isolated open collector output
- Fast response time (within 200µsecs.) / Power saving design
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

Model		GDIO-1616L2-PCI	GDIO-3232L2-PCI
Input channels		16	32
Output channels		16	32
Input specifications	Type	Opto-Isolated (for sink current output)	
	Signal Level	12~24VDC	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA
	Resistance	4.7kΩ	
Output specifications	Type	Opto-Isolated Open Collector (current sinking type)	
	Rating	35VDC 100mA	
Response Time (Max.)		200µsec	
Internal Power		-	
Wiring Distance		50m	
I/O Address		Occupies 32 ports	
Power Consumption (Max.)		5VDC 200mA	5VDC 250mA
Bus / Dimensions (mm)		PCI(32bit,33MHz,5Vor3.3V*1)/ 121.69(L)×105.68(H)	PCI(32bit,33MHz,5Vor3.3V*1)/ 176.41(L)×105.68(H)
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent
Options	Software	ACX-PAC(W32)	
	Accessories	EPD-37A*2*3, EPD-37*2, DTP-3A*2, DTP-4A*2, CM-32(PC)E*2, DICT-37S*2, DICT-37F*2	EPD-96A*3*4, EPD-96*4, DTP-64(PC)*4,EPD-37A*3*5, EPD-37*5, DTP-3A*5, DTP-4A*5, CCB-96*4, DICT-37S*6, DICT-37F*5, DICT-96S*4, DICT-96F*4
	Cables / Connectors	PCA37P,PCB37P,PCA37PS, PCB37PS,CN5-D37M	PCA96P, GPCB96PS[PCB96PS], PCB96P, PCA96PS, GPCB96WS[PCB96WS], CN5-H96F
Note		*1: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only). *2: Requires optional cable PCB37P or PCB37PS. *3: The screw-up teminal block is used, whose screw does not falling off. *4: Requires optional cable PCB96P or GPCB96PS[PCB96PS]. *5: Requires optional cable GPCB96WS[PCB96WS].	

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

PCI

37-pin D-SUB | Input 16 | Output 16 | Non-Isolated | Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital I/O

GDIO-1616T2-PCI
[PIO-16/16T(PCI)H]

- 16 TTL-Level input, 16 TTL-Level output (Max. 40mA sink current)
- Digital filtering function to prevent input error caused by noise and/or chattering
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-16/16T(PCI)

RoHS Compliant

PCI

96-pin Half Pitch | Input 32 | Output 32 | Non-Isolated | Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital I/O

GDIO-3232T2-PCI
[PIO-32/32T(PCI)H]

- 32 TTL-level input, 32 TTL-level output
- Digital filtering function to prevent input error caused by noise and/or chattering
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board PIO-32/32T(PCI)

RoHS Compliant

PCI & PCI Express

100-pin 0.8mm Pitch | Input 64 | Output 64 | Non-Isolated | Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital I/O

GDIO-6464T2-PCI
[DIO-6464T2-PCI]
GDIO-6464T-PE
[DIO-6464T-PE]

GDIO-6464T2-PCI

- 64 TTL-level input, 64 TTL-level output
- 16 input signals combine to one interrupt as INTA
- Fast response time (within 200nsecs)

RoHS Compliant

PCI

37-pin D-SUB | Output 16 | Isolated | High Voltage | Non Polarity

Windows Driver | Linux Driver | LabVIEW

Reed Relay Output

GRRY-16C2-PCI
[RRY-16C(PCI)H]

- 16 individual common reed relay outputs
- Output ratings: up to 125VAC/30VDC - 2A / channel
- Functions, Connector pin and Signal assignments are compatible with the PCI-compliant board RRY-16C(PCI)H

RoHS Compliant

Model		GDIO-1616T2-PCI	GDIO-3232T2-PCI	GDIO-6464T2-PCI / GDIO-6464T-PE	GRRY-16C2-PCI
Input channels		16	32	64	-
Output channels		16	32	64	16
Input specifications	Type	TTL-level (negative logic)			-
	Signal Level	5VDC			-
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA	64 interrupt signals combine to one interrupt request signal as INTA	-
	Resistance	Pull-up:10kΩ		Pull-up: 10kΩ (1TTL load)	-
Output specifications	Type	Open Collector (negative logic)			Reed Relay Contact (1-make contact)
	Rating	30VDC 40mA (per channel)			-
Response Time (Max.)		200µsec			7msec
Internal Power		-			-
Wiring Distance		Approx. 1.5m (according to cable)			-
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		5VDC 200mA	5VDC 350mA	5VDC 450mA / 3.3VDC 800mA	5VDC 550mA
Bus / Dimensions (mm)		PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H)		PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H) / PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)	PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H)
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent	HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent	37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent
Options	Software	ACX-PAC(W32)			
	Accessories	EPD-37A*2*3, EPD-37*2, DTP-3A*2, DTP-4A*2, DICT-37S*2, DICT-37F*2, CM-32(PC)E*2	EPD-96A*3*4, EPD-96*3, DTP-64(PC)*3,EPD-37A*3*5, EPD-37*5, DTP-3A*5, DTP-4A*5,CCB-96*4, DICT-37S*5, DICT-37F*5, DICT-96S*4, DICT-96F*4,CM-32(PC)E*5, CM-64(PC)E*4	EPD-100A*2*6, EPD-96A*2*7, EPD-96*7, DTP-64(PC)*7, EPD-37A*2*8, EPD-37*8, DTP-3A*8, DTP-4A*8, CCB-96*7, DICT-37S*8, DICT-37F*8, DICT-96S*7, DICT-96F*7	EPD-37A*1*2, EPD-37*1, DTP-3A*1, DTP-4A*1, DICT-37S*1, DICT-37F*1
	Cables / Connectors	PCA37P-1.5,PCB37P-1.5,PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P/1.5P,CN5-D37M	PCB96P-1.5, GPCB96PS[PCB96PS]-0.5P/1.5P, PCA96P-1.5P, PCA96PS-0.5P/1.5P, CN5-H96F	PCA100P, PCB100PS, PCB100WS, PCB100/96PS	PCA37P,PCB37S,PCA37PS, PCB37PS,CN5-D37M

Notes

*1: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only).
*2: Requires optional cable PCB37P or PCB37PS.
*3: The screw-up teminal block is used, whose screw does not falling off
*4: Requires optional cable PCB96P or GPCB96PS[PCB96PS].
*5: Requires optional cable GPCB96WS[PCB96WS].
*6: Requires optional cable PCB100PS.
*7: Requires optional cable PCB100/96PS.
*8: Requires optional cable PCB100WS.

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

PCI & PCI Express — 37-pin D-SUB — Input 32 — Non-isolated — Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Input

GDI-32T2-PCI
[DI-32T2-PCI]
GDI-32T-PE [DI-32T-PE]

NEW

- 32 TTL-level input
- All input signals can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Driver library for Windows/Linux bundled

PCI & PCI Express — 96-pin Half Pitch — Input 64 — Non-isolated — Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Input

GDI-64T2-PCI
[DI-64T2-PCI]
GDI-64T-PE [DI-64T-PE]

NEW

- 64 TTL-level input
- 32 input signals can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering
- Driver library for Windows/Linux bundled

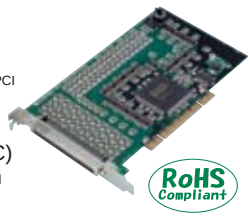
PCI — 96-pin Half Pitch — Input 64 — Isolated — Digital Filter — CE

Windows Driver | Linux Driver | LabVIEW

Opto-Isolated Digital Input

GDI-64L2-PCI
[PI-64L(PCI)H]

NEW



- 64 opto-isolated for superb noise resistance (12 to 24VDC)
- Fast response time (within 200µsec)/Power saving design
- 32 input signals can be used as interrupts
- Digital filter and interrupt trigger edge can be set via software

PCI & PCI Express — 100-pin 0.8mm Pitch — Input 128 — Non-Isolated — Digital Filter

Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Input

GDI-128T2-PCI
[DI-128T2-PCI]
GDI-128T-PE]
[DI-128T-PE]

- 128 TTL-level input
- 16 input signals combine to one interrupt as INTA
- Fast response time (within 200nsecs)
- Digital filtering function to prevent input error caused by noise and/or chattering

Model		GDI-32T2-PCI / GDI-32T-PE	GDI-64T2-PCI / GDI-64T-PE	GDI-64L2-PCI	GDI-128T2-PCI / GDI-128T-PE
Input channels		32 (1 common)	64 (1 common)	64	128 (1 common)
Output channels		-			
I/O channels		-			
Input specifications	Type	TTL-level (Negative logic)		Opto-Isolated (for sink current output)	TTL-level (negative logic)
	Signal Level	5VDC		12~24VDC	5VDC
	Interrupts	32 interrupt signals combine to one interrupt request signal as INTA			16 interrupt signals combine to one interrupt request signal as INTA
	Resistance	Pull-up 10kΩ (1 TTL load)		4.7kΩ	Pull-up:10kΩ(1TTL load)
Output specifications	Type	-			
	Rating	-			
Response Time (Max.)		within 200nsec		200µsec	200 nsec
Internal Power		-			5VDC, Current sum of 16 Vcc pin is 2A(Max.)
Wiring Distance		1.5m (depending on wiring environment)		50m	Approx. 1.5m (according to cable)
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		5VDC 200mA / 3.3VDC 300mA	5VDC 200mA / 3.3VDC 400mA	5VDC 250mA	5VDC 350mA / 3.3VDC 500mA
Bus / Dimensions (mm)		PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H) / PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)		PCI(32bit,33MHz,5Vor3.3V*1)/ 176.41(L)×105.68(H)	PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H) /PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent		HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent
Options	Software	ACX-PAC(W32)		-	
	Accessories	EPD-37A*2*3, EPD-37*2, DTP-3A*2, DTP-4A*2, CM-32(PC)E*2, DICT-37S*2, DICT-37F*2	EPD-96A*3*4, EPD-96*4, DTP-64(PC)*4, EPD-37A*3*5, EPD-37*5, DTP-3A*5, DTP-4A*5, CM-32(PC)E*5, CM-64(PC)E*4, CCB-96*4, DICT-37S*5, DICT-37F*5, DICT-96S*4, DICT-96F*4		EPD-100A*3*6, EPD-96A*3*7, EPD-96*7, EPD-37A*3*8, EPD-37*8, DTP-64(PC)*7, DTP-3A*8, DTP-4A*8, CM-32(PC)E*8, CM-64(PC)E*7, CCB-96*7, DICT-37S*8, DICT-37F*8, DICT-96S*7, DICT-96F*7
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	PCA96P, GPCB96PS[PCB96PS], PCB96P, PCA96PS, GPCB96WS[PCB96WS], CN5-H96F		PCA100P, PCB100PS, PCB100WS, PCB100/96PS

Notes

*1: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only).
*2: Requires optional cable PCB37P or PCB37PS
*3: The screw-up teminal block is used, whose screw does not falling off
*4: Requires optional cable PCB96P or GPCB96PS[PCB96PS]
*5: Requires optional cable GPCB96WS[PCB96WS]
*6: Requires optional cable PCB100PS
*7: Requires optional cable PCB100/96PS
*8: Requires optional cable PCB100WS

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

PCI & PCI Express

37-pin D-SUB | Output 32 | Non-isolated | Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Output

GDO-32T2-PCI
[DO-32T2-PCI]
GDO-32T-PE [DO-32T-PE]

NEW

- 32 open collector output
- Driver library for Windows/Linux bundled

GDO-32T2-PCI

RoHS Compliant

PCI & PCI Express

96-pin Half Pitch | Output 64 | Non-isolated | Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Output

GDO-64T2-PCI
[DO-64T2-PCI]
GDO-64T-PE [DO-64T-PE]

NEW

- 64 open collector output
- Driver library for Windows/Linux bundled

GDO-64T2-PCI

RoHS Compliant

PCI

96-pin D-SUB | Output 64 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE | Windows Driver | Linux Driver | LabVIEW

Opto-Isolated Digital Output

GDO-64L2-PCI
[PO-64L(PCI)H]

- 64 opto-isolated open collector output (35VDC, 100mA)
- Fast response time (within 200µsecs)
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

GDO-64L2-PCI

Pb Free

PCI & PCI Express

100-pin 0.8mm Pitch | Output 128 | Non-isolated | Windows Driver | Linux Driver | LabVIEW

TTL-level Digital Output

GDO-128T2-PCI
[DO-128T2-PCI]
GDO-128T-PE [DO-128T-PE]

- 128 TTL-level output
- Fast response time (within 200nsecs)
- Driver library for Windows/Linux bundled

GDO-128T2-PCI

RoHS Compliant

Model		GDO-32T2-PCI / GDO-32T-PE	GDO-64T2-PCI / GDO-64T-PE	GDO-64L2-PCI	GDO-128T2-PCI / GDO-128T-PE
Input channels		-		-	
Output channels		32 (1 common)	64 (1 common)	64	128 (1 common)
I/O channels		-			
Input specifications	Type	-			
	Signal Level	-			
	Interrupts	-			
	Resistance	Pull-up 10kΩ (1 TTL load)		-	
Output specifications	Type	Open Collector (Negative logic)		Opto-Isolated Open Collector (current sinking type)	Open Collector (negative logic)
	Rating	30VDC 40mA (per channel)		35VDC 100mA	30VDC 40mA (per channel)
Response Time (Max.)		within 200nsec (according to Pull-up resistance)		200µsec	200 nsec
Internal Power		-		12VDC 240mA	5VDC, Current sum of 16 Vcc pin is 2A(Max.)
Wiring Distance		1.5m (depending on wiring environment)		50m	Approx. 1.5m (according to cable)
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		5VDC 200mA / 3.3VDC 550mA	5VDC 310mA / 3.3VDC 800mA	5VDC 250mA	5VDC 500mA / 3.3VDC 1400mA
Bus / Dimensions (mm)		PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H) / PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)		PCI(32bit,33MHz,5Vor3.3V*1)/ 176.41(L)×105.68(H)	PCI(32bit,33MHz,5Vor3.3V*1)/121.69(L)×105.68(H) / PCI Express Base Specification Rev. 1.0a ×1 / 121.69(L)×105.68(H)
Connector		37pin female D-type, DCLC-J37SAF-20L9E [JAE] or equivalent	96pin female half-pitch: PCR-96LMD [HONDA Tsushin Kogyo] or equivalent		HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent
Options	Software	ACX-PAC(W32)		-	
	Accessories	EPD-37A*2*3, EPD-37*2, DTP-3A*2, DTP-4A*2, CM-32(PC)E*2, DICT-37S*2, DICT-37F*2	EPD-96A*3*4, EPD-96*4, DTP-64(PC)*4, EPD-37A*3*5, EPD-37*5, DTP-3A*5, DTP-4A*5, CM-32(PC)E*5, CM-64(PC)E*4, CCB-96*4, DICT-37S*5, DICT-37F*5, DICT-96S*4, DICT-96F*4		EPD-100A*3*6, EPD-96A*3*7, EPD-96*7, EPD-37A*3*8, EPD-37*8, DTP-64(PC)*7, DTP-3A*8, DTP-4A*8, CM-32(PC)E*8, CM-64(PC)E*7, CCB-96*7, DICT-37S*8, DICT-37F*8, DICT-96S*7, DICT-96F*7
	Cables / Connectors	PCA37P-1.5, PCA37PS-0.5P/1.5P, PCB37P-1.5, PCB37PS-0.5P/1.5P, CN5-D37M	PCA96P, GPCB96PS[PCB96PS], PCB96P, PCA96PS, GPCB96WS[PCB96WS], CN5-H96F		PCA100P, PCB100PS, PCB100WS, PCB100/96PS

Notes

*1: This board requires power supply at +5 V from an expansion slot (it does not work on a machine with a +3.3V power supply only).
*2: Requires optional cable PCB37P or PCB37PS
*3: The screw-up teminal block is used, whose screw does not falling off
*4: Requires optional cable PCB96P or GPCB96PS[PCB96PS]
*5: Requires optional cable GPCB96WS[PCB96WS]
*6: Requires optional cable PCB100PS
*7: Requires optional cable PCB100/96PS
*8: Requires optional cable PCB100WS

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

USB 2.0 | Input 8 | Output 8 | Non-isolated | Windows Driver

USB cable included

LVTTL-Level USB Digital I/O Terminal

GDIO-0808TY-USB
[DIO-0808TY-USB]

NEW

- 8 TTL-level inputs, 8 open collector outputs
- USB2.0/USB1.1-compliant, Bus-powered for convenience and portability
- I/O transistor has built-in zener diode for voltage surge proctection
- Screw-type connectors for easy wiring

RoHS Compliant

14-pin Screw-type Terminal connector (6 parts in one)
CN6-Y14

USB 2.0 | Input 16 | Non-isolated | Windows Driver

USB cable included

LVTTL-Level USB Digital Input Terminal

GDI-16TY-USB
[DI-16TY-USB]

NEW

- 16 TTL-level inputs
- USB2.0/USB1.1-compliant, Bus-powered for convenience and portability
- Input transistor has built-in zener diode for voltage surge proctection
- Screw-type connectors for easy wiring

RoHS Compliant

14-pin Screw-type Terminal connector (6 parts in one)
CN6-Y14

USB 2.0 | Output 16 | Non-isolated | Windows Driver

USB cable included

LVTTL-Level USB Digital Ouput Terminal

GDO-16TY-USB
[DO-16TY-USB]

NEW

- 16 open collector outputs
- USB2.0/USB1.1-compliant, Bus-powered for convenience and portability
- Output transistor has built-in zener diode for voltage surge proctection
- Screw-type connectors for easy wiring

RoHS Compliant

14-pin Screw-type Terminal connector (6 parts in one)
CN6-Y14

Model		GDIO-0808TY-USB	GDI-16TY-USB	GDO-16TY-USB	
Input channels		8 (1 common)	16 (1 common)	-	
Output channels		8 (1 common)	-	16 (1 common)	
I/O channels		-			
Input specifications	Type	TTL-level (Negative logic)		-	
	Signal Level	5VDC		-	
	Interrupts	-			
	Resistance	10kΩ (1 TTL load)		-	
Output specifications	Type	Open Collector (negative logic)	-	Open Collector (negative logic)	
	Rating	28VDC 40mA (per channel)	-	28VDC 40mA (per channel)	
Response Time (Max.)		Input: 200nsec, Output: 200nsec (according to the Pull-up value) *1	200nsec	200nsec (according to the Pull-up value) *1	
Internal Power		-			
Wiring Distance		1.5m (depending on wiring environment)			
USB speed		12Mbps <Full speed>, 480Mbps <High speed> *2			
Power Consumption (Max.)		5VDC 300mA		5VDC 350mA	
Dimensions (mm)		64(W)×62(D)×24(H) (exclusive of protrusions)			
Connector		14-pin (screw-terminal) plug header			
Weight (main unit)		70g (excluding the USB cable, attachment)			
Included cable Length		USB cable 1.8m			
Options	Software	ACX-PAC(W32)			
	Accessories	BRK-USB-Y			
	Cables / Connectors	CN6-Y14			
Notes		*1: It is the response time of output IC. *2: Depending on the host PC environment (OS and USB host controller)			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Digital I/O

■Related Products of G series

MODEL No.	Equivalent Model	Description
GDI-128L2-PCI	PI-128L(PCI)H	128 Ch Opto-isolated Digital Input board for PCI
GDI-16(FIT)GY	DI-16(FIT)GY	16Ch 12 to 24 VDC Isolated Digital Input module for F&eIT
GDI-32(FIT)GY	DI-32(FIT)GY	32Ch 12 to 24 VDC Isolated Digital Input module for F&eIT
GDIO-0808LY-USB	DIO-0808LY-USB	8 Ch Input/ 8 Ch Output Opto-isolated USB Digital I/O terminal
GDIO-16/16(FIT)GY	DIO-16/16(FIT)GY	16 Ch 12 to 24 VDC Inputs / 16 Ch 12 to 48 VDC Outputs Digital I/O module for F&eIT
GDIO-16/16(USB)	DIO-16/16(USB)	16 Ch Input/ 16 Ch Output Opto-isolated USB Digital I/O terminal
GDIO-24DY-USB	DIO-24DY-USB	24 Ch LVTTL Level Bi-directional USB Digital I/O terminal
GDIO-6464L2-PCI	PIO-64/64L(PCI)H	64 Ch Input/ 64 Ch Output Opto-isolated Digital I/O board for PCI
GDIO-8/8(FIT)GY	DIO-8/8(FIT)GY	8 Ch Inputs / 8 Ch Outputs (12 to 24 VDC) Digital I/O module for F&eIT
GDIO-8/8(USB)GY	DIO-8/8(USB)GY	8 Ch Inputs / 8 Ch Outputs USB Digital I/O terminal
GDO-128L2-PCI	PO-128L(PCI)H	128 Ch Opto-isolated Digital Output board for PCI
GDO-16(FIT)GY	DO-16(FIT)GY	16Ch 12 to 48 VDC Isolated Digital Output module for F&eIT
GDO-32(FIT)GY	DO-32(FIT)GY	32Ch 12 to 24 VDC Isolated Digital Output module for F&eIT
GPIO-16/16RL(PCI)H	PIO-16/16RL(PCI)H	16 Ch Input/ 16 Ch Output Negative Common Opto-Isolated Digital I/O board for PCI
GPIO-32/32RL(PCI)H	PIO-32/32RL(PCI)H	32 Ch Input/ 32 Ch Output Negative Common Opto-Isolated Digital I/O board for PCI
GPIO-32DM(PCI)	PIO-32DM(PCI)	32 Ch High speed Bi-directional Digital I/O board for PCI

Serial Communication

PCI Express | 9-pin D-SUB×2 | RS-232C 2ch | 921.6K bps | Windows Driver | Linux Driver

2 Port RS-232C
GCOM-2C-PE
[COM-2C-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 9-pin D-type male connector

PCI Express | 37-pin D-SUB | RS-232C 4ch | 921.6K bps | Windows Driver | Linux Driver

4 Port RS-232C
GCOM-4C-PE
[COM-4C-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 4 port 9-pin D-type connector cable bundled (GCOM-4C-PE only)

PCI Express | 78-pin D-SUB | RS-232C 8ch | 921.6K bps | Windows Driver | Linux Driver

8 Port RS-232C
GCOM-8C-PE
[COM-8C-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel

Model		GCOM-2C-PE	GCOM-4C-PE	GCOM-8C-PE	
Interface type		RS-232C (Async.)			
Number of Channels		2ch	4ch	8ch	
Speed		2~921,600bps *1*2			
Data type		5/6/7/8 Bit, 1/1.5/2 Stop Bit *1			
Parity Check		even, odd, non-parity *1			
Controller		162850 compliant (FIFO buffer: I/O 64 bytes per channel)			
Interrupts		1 *3			
Wiring Distance		15m (Max.)			
Isolation type		-			
Isolation Voltage		-			
I/O Address		Occupies 32 ports		Occupies 64 ports	
Power Consumption (Max.)		3.3VDC 350mA			
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 121.69(L)×110.18(H)			
Included cable length		-	0.25m (GPCE37/9PS)		
Connector		9-pin male D-type: DECLJ9PAF-20L9E [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent	78-pin female D-type: DV11603G4 [FOXCONN] or equivalent	
Options	Software	API-PAC(W32), ACX-PAC(W32)			
	Accessories	-	GCCU-78F/25M[CCU-78F/25M]*4	GCCU-78F/25M[CCU-78F/25M]*5	
	Cables / Connectors	RSS-9M/F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F	GPCE37/9PS bundled, PCE37/25PS, RSS-78M/37M, CN5-D37M	PCE78/9PS, GRSS-78M[RSS-78M] PCE78/25PS, CN5-D78M	

Note
*1: Software selectable speed, which can become 15~921,600bps when using the Standard COM Driver Software [COM Setup Disk] and the Driver Library [API-PAC(W32)]
*2: The data transmission at high speed may not be performed normally owing to the environment, including the type of the connected devices and the length of the connected cables
*3: A single interrupt signal "INTA" is output as a collection of interrupt input signals from all channels
*4: Requires use of optional cable RSS-78M/37M
*5: Requires use of optional cable RSS-78M

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Serial Communication

PCI Express — 9-pin D-SUB×2 / RS-232C 2ch / 921.6K bps / Individual Isolated / Surge Protection / Windows Driver / Linux Driver

RoHS Compliant

2 Port RS-232C
GCOM-2PC-PE [COM-2PC-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Channels individually insulated signals are surge protected
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 9-pin D-type male connector

PCI Express — 37-pin D-SUB / RS-232C 4ch / 921.6K bps / Individual Isolated / Surge Protection / Windows Driver / Linux Driver

RoHS Compliant

4 Port RS-232C
GCOM-4PC-PE [COM-4PC-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Channels individually insulated signals are surge protected
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 4 port 9-pin D-type connector cable bundled (GCOM-4PC-PE only)

PCI Express — 9-pin D-SUB×2 / RS-422A/485 2ch / 921.6K bps / Individual Isolated / Surge Protection / Windows Driver / Linux Driver

RoHS Compliant

2 Port RS-422A/485
GCOM-2PD-PE [COM-2PD-PE]

NEW

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Channels individually insulated signals are surge protected
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel

PCI Express — 37-pin D-SUB / RS-422A/485 4ch / 921.6K bps / Individual Isolated / Surge Protection / Windows Driver / Linux Driver

RoHS Compliant

4 Port RS-422A/485
GCOM-4PD-PE [COM-4PD-PE]

NEW

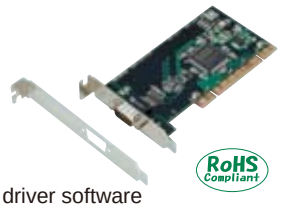
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Channels individually insulated signals are surge protected
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 4 port 9-pin D-type connector cable bundled (GCOM-4PD-PE only)

Model		GCOM-2PC-PE	GCOM-4PC-PE	GCOM-2PD-PE	GCOM-4PD-PE
Interface type		RS-232C (Async.)		RS-422A/RS-485(Async.), Full-duplex or Half-duplex communication mode	
Number of Channels		2ch	4ch	2ch	4ch
Speed		2~921,600bps *1*2			
Data type		5/6/7/8 Bit, 1/1.5/2 Stop Bit *1			
Parity Check		even, odd, non-parity *1			
Controller		162850 compliant (FIFO buffer: I/O 64 bytes per channel)			
Interrupts		1 *3			
Wiring Distance		15m (Max.)		1200m (Max.)	
Isolation type		Channel Isolation & Bus Isolation			
Isolation Voltage		Channel Isolation: 1000VDC, Bus Isolation: 1000VDC	Channel Isolation: 500VDC, Bus Isolation: 1000VDC	Channel Isolation: 1000VDC, Bus Isolation: 1000VDC	Channel Isolation: 500VDC, Bus Isolation: 1000VDC
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		3.3VDC 950mA	3.3VDC 1600mA	3.3VDC 1100mA	3.3VDC 1600mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 121.69(L)×110.18(H)	PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)	PCI Express Base Specification Rev.1.0a ×1 / 121.69(L)×110.18(H)	PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)
Included cable length		-	0.25m (GPCE37/9PS)	-	0.25m (GPCE37/9PS)
Connector		pin male D-type: DECLJ9PAF-20L9E [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent	9-pin male D-type: DECLJ9PAF-20L9E [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent
Options	Software	API-PAC(W32), ACX-PAC(W32)			
	Accessories	-	GCCU-78F/25M[CCU-78F/25M]*4	-	
	Cables / Connectors	RSS-9M/F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F	GPCE37/9PS bundled, PCE37/9PS, RSS-78M/37M, CN5-D37M	CN5-D9F	GPCE37/9PS bundled, PCE37/9PS, CN5-D37M
Note		*1: Software selectable speed, which can become 15~921,600bps when using the Standard COM Driver Software [COM Setup Disk] and the Driver Library [API-PAC(W32)] *2: The data transmission at high speed may not be performed normally owing to the environment, including the type of the connected devices and the length of the connected cables *3: A single interrupt signal "INTA" is output as a collection of interrupt input signals from all channels. *4: Requires use of optional cable RSS-78M/37M			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Serial Communication

PCI | Low Profile | 9-pin D-SUB | RS-232C 1ch | 921.6K bps | CE | Windows Driver | Linux Driver



1 Port RS-232C Communication Board

GCOM-1C2-LPCI
[COM-1(LPCI)H]

- Low Profile PCI-compliant (Standard-size bracket included)
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception)
- 9-pin D-type male connector

PCI | 9-pin D-SUB×2 | RS-232C 2ch | 921.6K bps | CE | Windows Driver | Linux Driver

2 Port RS-232C Communication Board

GCOM-2C2-PCI
[COM-2(PCI)H]

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 9-pin D-type male connector
- 128-byte FIFO buffer (both transmission and reception)

PCI | 37-pin D-SUB | RS-232C 4ch | 921.6K bps | CE | Windows Driver | Linux Driver

4 Port RS-232C Communication Board

GCOM-4C2-PCI
[COM-4(PCI)H]

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception)
- 4 port 9-pin D-type connector cable bundled (GCOM-4C2-PCI only)

PCI | 78-pin D-SUB | RS-232C 8ch | 921.6K bps | CE | Windows Driver | Linux Driver

8 Port RS-232C Communication Board

GCOM-8C2-PCI
[COM-8(PCI)H]

- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception)

Model		GCOM-1C2-LPCI	GCOM-2C2-PCI	GCOM-4C2-PCI	GCOM-8C2-PCI
Interface type		RS-232C (Async.)			
Number of Channels		1ch	2ch	4ch	8ch
Speed		2-921,600bps*1*2			
Data type		5/6/7/8 Bits, 1/1.5/2 Stop Bits			
Parity Check		Even, Odd, Non-parity			
Controller		162850 compliant (FIFO buffer: I/O 128-byte per channel)			
Interrupts		1*3			
Wiring Distance		15m (Max.)			
Isolation type		-			
Isolation Voltage		-			
I/O Address		Occupies 32 ports			Occupies 64 ports
Power Consumption (Max.)		3.3VDC 100mA (JP1: 1, 2), 5VDC 100mA (JP1: 2, 3)			3.3VDC 250mA (JP1: 1, 2), 5VDC 250mA (JP1: 2, 3)
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*4) / 121.69(L)×63.41(H)	PCI (32bit, 33MHz, 5V or 3.3V*4) / 121.69(L)×105.68(H)		
Attachment		DRV-PAC(W32)		DRV-PAC(W32), GPCE37/9PS included	DRV-PAC(W32)
Connector		9-pin D-type male connector: DELC-J9PAF-20L9 [JAE] or equivalent		37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent	78-pin female D-type: DV11603G4 [FOXCONN] or equivalent
Options	Software	-			
	Accessories	-		GCCU-78F/25M[CCU-78F/25M]*5	GCCU-78F/25M[CCU-78F/25M]*6
	Cables / Connectors	RSS-9M/F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F		GPCE37/9PS bundled, PCE37/25PS, RSS-78M/37M, CN5-D37M	PCE78/9PS, GRSS-78M[RSS-78M] PCE78/25PS, CN5-D78M
Note		*1: Software selectable speed, which can become 15~921,600bps when using the Standard COM Driver Software [COM Setup Disk] and the Driver Library [API-PAC(W32)]. *2: The data transmission at high speed may not be performed normally owing to the environment, including the type of the connected devices and the length of the connected cables. *3: A single interrupt signal "INTA" is output as a collection of interrupt input signals from all channels. *4: Power voltage is set by jumper. (5VDC or 3.3VDC). *5: Requires use of optional cable RSS-78M/37M. *6: Requires use of optional cable RSS-78M.			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Serial Communication

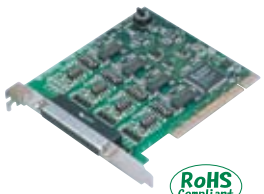
PCI | 9-pin D-SUB×2 | RS-422A/485 2ch | 921.6K bps | Individual Isolated | Surge Pmtection | CE
Windows Driver | Linux Driver

2 Port Isolated RS-422A/485 Communication Board

GCOM-2PD2-PCI
[COM-2PD(PCI)H]

- 2 RS-422A/RS485-compatible channels
- On-board isolated circuit provides safe communication, even over long distances
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception)

PCI | 37-pin D-SUB | RS-422A/485 4ch | 921.6K bps | Individual Isolated | Surge Pmtection | CE
Windows Driver | Linux Driver



4 Isolated Port RS-422A/485 Communication Board

GCOM-4PD2-PCI
[COM-4PD(PCI)H]

- 4 RS-422A/RS485-compatible channels
- On-board isolated circuit provides safe communication, even over long distances
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception)

PCI | 9-pin D-SUB ×2 | RS-232C 2ch | 921.6 Kbps | Individual Isolated | Surge Protection | CE
Windows Driver | Linux Diver

2 Port Isolated RS-232C

GCOM-2P(PCI)H
[COM-2P(PCI)H]

- Channels individually insulated / signals are surge protected
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel
- 9-pin D-type male connector

PCI | 37-pin D-SUB | RS-232C 4ch | 921.6 Kbps | Individual Isolated | Surge Protection | CE
Windows Driver | Linux Diver

4 Port Isolated RS-232C

GCOM-4P(PCI)H
[COM-4P(PCI)H]

- Channels individually insulated / signals are surge protected
- Functions as a standard COM port in Windows or Linux with bundled driver software
- Up to 16 boards can be added with settings of COM1~256
- 128-byte FIFO buffer (both transmission and reception) provided for each channel

Model		GCOM-2PD2-PCI	GCOM-4PD2-PCI	GCOM-2P(PCI)H	GCOM-4P(PCI)H
Interface type		RS-422A/RS-485 (Isolated), Full-duplex or Half-duplex communication mode		RS-232C (Async. & Isolated)	
Number of Channels		2ch	4ch	2ch	4ch
Speed		2~921,600bps *1*2			
Data type		5/6/7/8 Bits, 1/1.5/2 Stop Bits			
Parity Check		Even, Odd, Non-parity			
Controller		162850 compliant (FIFO buffer: I/O 128-byte per channel)			
Interrupts		1*3			
Wiring Distance		1200m (Max.)		15m (Max.)	
Isolation type		Individual isolation, Bus isolation			
Isolation Voltage		Individual isolation: 1000VDC, Bus isolation: 1000VDC	Individual isolation: 500VDC, Bus isolation: 1000VDC	Individual isolation: 1000VDC, Bus isolation: 1000VDC	Individual isolation: 500VDC, Bus isolation: 1000VDC
I/O Address		Occupies 32 ports			
Power Consumption (Max.)		5VDC 550mA	5VDC 950mA	5VDC 600mA	5VDC 1000mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*4) / 121.69(L)×105.68(H)			
Attachment		DRV-PAC(W32)	DRV-PAC(W32), GPCE37/9PS included	API-PAC(W32)	
Connector		9-pin D-type male connector: DELC-J9PAF-20L9 [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent	9-pin D-type male connector: DELC-J9PAF-20L9 [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent
Options	Software	-			
	Accessories	-	GCCU-78F/25M[CCU-78F/25M]*5		
	Cables / Connectors	CN5-D9F	GPCE37/9PS bundled, PCE37/25PS, RSS-78M/37M, CN5-D37M	RSS-9M/F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F	PCE37/9PS, PCE37/25PS, CN5-D37M
Notes		*1: Software selectable speed, which can become 15~921,600bps when using the Standard COM Driver Software [COM Setup Disk] and the Driver Library [API-PAC(W32)]. *2: The data transmission at high speed may not be performed normally owing to the environment, including the type of the connected devices and the length of the connected cables. *3: A single interrupt signal "INTA" is output as a collection of interrupt input signals from all channels. *4: Power voltage is set by jumper. (5VDC or 3.3VDC). *5: Requires use of optional cable RSS-78M/37M.			

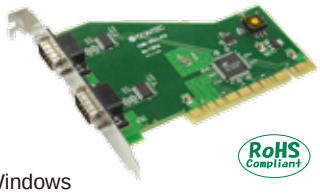
As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Serial Communication

PCI | 9-pin D-SUB×2 | RS-232C 2ch | 230.4K bps | Windows Driver | Linux Driver

Low Price 2 Port RS-232C Communication Board

GCOM-2CL-PCI



- ±15KV, ESD Overcurrent/Surge protected
- Functions as a standard COM board when used under Windows
- Up to 16 boards can be added with settings of COM1~256
- 64-byte FIFO buffer (both transmission and reception)

PCI | 37-pin D-SUB | RS-232C 4ch | 230.4K bps | Windows Driver | Linux Driver

Low Price 4 Port RS-232C Communication Board

GCOM-4CL-PCI

- ±15KV, ESD Overcurrent/Surge protected
- Functions as a standard COM board when used under Windows
- Up to 16 boards can be added with settings of COM1~256
- 64-byte FIFO buffer (both transmission and reception)

PCI | 9-pin D-SUB×2 | RS-422A/485 2ch | 230.4K bps | Windows Driver | Linux Driver

2 Port RS-422A/485 Communication Board

GCOM-2DL-PCI

- 2 RS-422A/RS485-compatible channels
- Channels individually insulated signals are surge protected
- Functions as a standard COM board when used under Windows
- Up to 16 boards can be added with settings of COM1~256
- 64-byte FIFO buffer (both transmission and reception)

PCI | 37-pin D-SUB | RS-422A/485 4ch | 230.4K bps | Windows Driver | With Cable

4 Port RS-422A/485 Communication Board

GCOM-4DL-PCI

- 4 RS-422A/RS485-compatible channels
- Channels individually insulated signals are surge protected
- Functions as a standard COM board when used under Windows
- Up to 16 boards can be added with settings of COM1~256
- 64-byte FIFO buffer (both transmission and reception)

Model		GCOM-2CL-PCI	GCOM-4CL-PCI	GCOM-2DL-PCI	GCOM-4DL-PCI
Interface type		RS-232C (Async.)		RS-422A/RS-485 (Isolated), Full-duplex or Half-duplex communication mode	
Number of Channels		2ch	4ch	2ch	4ch
Speed		15~230,400bps *1			
Data type		5/6/7/8 Bits, 1/1.5/2 Stop Bits			
Parity Check		Even, Odd, Non-parity			
Controller		XR17C152 compliant (FIFO buffer: I/O 64-byte per channel)	XR17C154 compliant (FIFO buffer: I/O 64-byte per channel)	XR17C152 compliant (FIFO buffer: I/O 64-byte per channel)	XR17C154 compliant (FIFO buffer: I/O 64-byte per channel)
Interrupts		1*2			
Wiring Distance		15m (Max.)		1200m (Max.)	
Isolation type		-			
Isolation Voltage		-			
Memory Address		Occupies 1024 bytes	Occupies 2048 bytes	Occupies 1024 bytes	Occupies 2048 bytes
Power Consumption (Max.)		5VDC 100mA	5VDC 120mA	5VDC 340mA	5VDC 640mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V) / 121.69(L)×88.00(H)		PCI(32bit,33MHz,5V)/ 119.91(L) × 88.00(H)	PCI(32bit,33MHz,5V)/ 119.91(L) × 105.68(H)
Attachment		DRV-PAC(W32)	DRV-PAC(W32), GPCE37/9PS included	DRV-PAC(W32)	DRV-PAC(W32), GPCE37/9PS included
Connector		9-pin D-type male connector: DELC-J9PAF-20L9 [JAE] or equivalent	37-pin female D-type:DCLC-J37SAF-20L9E [JAE] or equivalent	9-pin D-type male connector: DELC-J9PAF-20L9 [JAE] or equivalent	37-pin D-type female connector: DCLC-J37SAF-20L9 [JAE] or equivalent
Options	Software	-			
	Accessories	-	GCCU-78F/25M[CCU-78F/25M]*3		
	Cables / Connectors	RSS-9MF, RSC-9F, RSS-255M/9F, RSC-25F/9F, CN5-D9F	GPCE37/9PS bundled, PCE37/25PS, RSS-78M/37M, CN5-D37M	CN5-D9F	GPCE37/9PS bundled, CN5-D37M
Notes		*1: The data transmission at high speed may not be performed normally owing to the environment, including the type of the connected devices and the length of the connected cables. *2: A single interrupt signal "INTA" is output as a collection of interrupt input signals from all channels. *3: Requires use of optional cable RSS-78M/37M.			

As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.

Serial Communication

■Related Products of G series

MODEL No.	Equivalent Model	Description
GCCU-78F/25M	CCU-78F/25M	78pin D-SUB -> 25pin D-type (F) x8 Unit for GCOM-8C/4C
GCOM-1PD(FIT)GY	COM-1PD(FIT)GY	1 Ch RS-422/485 Communication module for F&eIT
GCOM-2(FIT)GY	COM-2(FIT)GY	2 Ch RS-232C Communication module for F&eIT
GRP-COM(FIT)H	RP-COM(FIT)H	RS-232C-Ethernet Media Converter
GRP-COM(FIT)H-AF	RP-COM(FIT)H-AF	RS-232C-Ethernet Media Converter, supports Power-over-Ethernet

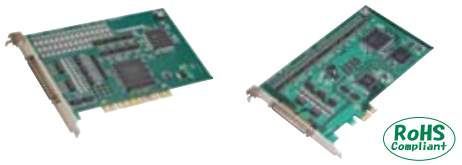
Counter & Motion Controller

PCI & PCI Express | 100-pin D-SUB | Motion Controller 4 | Limit Switch Input | Synchronization control | Windows Driver

High Speed 4 Axes Motion Controller

GSMC-4DL-PE
[SMC-4DL-PE]
GSMC-4DL-PCI
[SMC-4DL-PCI]

NEW



- Stepping and servo motors are easily controlled in familiar Windows environments
- Enable to control Consecutive Movement, Target Location, ORG return, etc. by Fixed Speed, Beeline Acceleration/Deceleration
- Encoders compatible with Differential output, TTL-level output, Open collector output are provided
- Pulse output of up to 9.8Mbps is supported
- Override of Speed or Target Location in the movement is provided
- 7 General-purpose input per axis, 3 General-purpose output

PCI & PCI Express | 100-pin D-SUB | Motion Controller 8 | Limit Switch Input | Synchronization control | Windows Driver

High Speed 8 Axes Motion Controller

GSMC-8DL-PE
[SMC-8DL-PE]
GSMC-8DL-PCI
[SMC-8DL-PCI]

NEW

- Stepping and servo motors are easily controlled in familiar Windows environments
- Enable to control Consecutive Movement, Target Location, ORG return, etc. by Fixed Speed, Beeline Acceleration/Deceleration
- Encoders compatible with Differential output, TTL-level output, Open collector output are provided
- Pulse output of up to 9.8Mbps is supported
- Override of Speed or Target Location in the movement is provided
- 7 General-purpose input per axis, 3 General-purpose output

Realtime OS: INtime can support. Please contact us for further information.

Model		GSMC-4DL-PE	GSMC-8DL-PE	GSMC-4DL-PCI	GSMC-8DL-PCI
Number of Axes		4	8	4	8
Pulse output	Output Specifications	2-pulse (CW/CCW) or Common-pulse (Pulse/Direction) or 90°Phase Difference pulse (Lead/Lag)			
	Signal type	Differential Line Driver output			
	Pulse Rate	0.3~9.8Mpps			
	H-level Voltage	2.5V~5.25V			
	L-level Voltage	0V~0.5V			
Encoder input	Signal Form	Single-phase (UP/DOWN/Z), Two-phase (A/B/Z)			
	Output type	Differential, TTL-level, Open Collector			
	Response Frequency	5MHz [Differential output: Two-phase input, Four twice, duty 50%]; 3MHz [TTL-level output: Two-phase input, Four twice, duty 50%]; 1MHz [Open Collector output: Two-phase input, Four twice, duty 50%]			
	Resistance	150Ω (SW cut-able)			
Limit Switch input	Signals	3 signals/ch (ORG, +LIM, -LIM)			
	Signal type	Opto-isolated input (for sink current output)			
	Input Resistance	4.7kΩ			
General-purpose input	Signals	7 signals/ch			
	Signal type	Opto-isolated input (for sink current output)			
	Resistance	4.7kΩ			
General-purpose output	Signals	3 signals/ch			
	Signal type	Open Collector (Current sinking type) (software selectable positive/negative logic)			
	Rating	50VDC 100mA per channel, 300mA per axis			
Controller Chip		PCL6143 [NPM] or equivalent			
Interrupts		1			
I/O Address		Any 128-byte boundary			
Power Consumption (Max.)		3.3VDC 1500mA	3.3VDC 2100mA	5VDC 700mA	5VDC 1200mA
Bus / Dimensions (mm)		PCI Express Base Specification Rev.1.0a ×1 / 169.33(L)×110.18(H)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L)×106.68(H)	
Connector		HDRA-EC100LFDT+ [HONDA Tsushin Kogyo] or equivalent	HDRA-E100W1LFDT1EC-SL+ [HONDA Tsushin Kogyo] or equivalent	HDRA-EC100LFDT+ [HONDA Tsushin Kogyo] or equivalent	HDRA-E100W1LFDT1EC-SL+ [HONDA Tsushin Kogyo] or equivalent
Options	Software	ACX-PAC(W32)			
	Accessories	CCB-SMC2*1*2*3, EPD-100A*2*3*4			
	Cables / Connectors	PCB100PS, PCA100P			
Note		*1: 100-pin 0.8mm pitch connector ×1 → 37-pin D-SUB×4, 9-pin D-SUB×4 *3: Cable and accessory are needed for each connector.		*2: Requires use of optional cable PCB100PS *4: The screw-up teminal block is used, whose screw does not falling off.	
		As shown on the side of product's images, RoHS Compliant is a CONTEC original marking for RoHS-compliant products.			

■Related Products of G series

MODEL No.	Equivalent Model	Description
GSMC-4DF-PCI	SMC-4DF-PCI	4 axis high-speed line driver output motion controller with high functionality for PCI
GSMC-8DF-PCI	SMC-8DF-PCI	8 axis high-speed line driver output motion controller with high functionality for PCI

Expansion Unit / Bus Adapter

PCI Express

Low Profile

To be compliant

RoHS Compliant

PCI Express Cable Expansion Adapter (Host PC)

GEAD-CE-LPE
[EAD-CE-LPE]

NEW

- PCI bus (5V/32bit 33MHz) can be added using one PCI Express slot of the host PC
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Both Low Profile and Standard PCI slots are supported by using the included bracket

Express Card

To be compliant

RoHS Compliant

PCI Express Cable Expansion Adapter (Host PC)

GEAD-CE-EC
[EAD-CE-EC]

NEW

- PCI bus (5V/32bit 33MHz) can be added using one Express Card slot of the host notebook PC
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply

PCI Express Cable PCI bus expansion chassis

GECH-PCI-CE-H2B
[ECH-PCI-CE-H2B]

4 Slots

Short Size

To be compliant

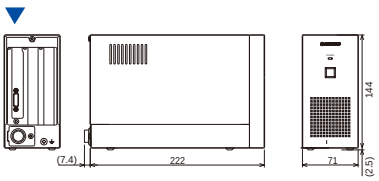
NEW

RoHS Compliant

- 2 x PCI expansion slots
- Length accomodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan

■ Dimensions

GECH-PCI-CE-H2B



Model	EAD-CE-LPE	EAD-CE-EC
Bus type	PCI Express Base Specification Rev.1.0a ×1	ExpressCard Standard Release 1.1
Card slot	-	
Dimensions (mm)	121.69(L) × 67.90(H)	121.69(L) × 34(H)
Bus Operating Clock	-	
Power Consumption (Max.)	3.3VDC 50mA	3.3VDC 50mA
Operating Conditions	0~50°C, 10~90%RH (no condensation)	
Attached cable	CB-CE1 (cable length: 1m)	

Model	GECH-PCI-CE-H2B
Bus type	PCI Local Bus Specification Rev2.3 (+5Vtype)
Address Space	32bit memory address, I/O address
Interrupt level	INTA - INTD
Bus Clock	33MHz (Max.)
User slots	2 slots (short size)
Installable board (mm)	176.5(L) x 107(H)
Power supply capacity (Max.)	Must not exceed the value below +5VDC 7A (Max.) *1, +3.3VDC 3A (Max.) *1 +12VDC 1.5A (Max.), -12VDC 0.3A (Max.)
AC input voltage*1	100 - 240VAC
Overall maximum power supply capacity	60W
Dimensions(mm)	71.0(W) x 144.0(H) x 222.0(L) (without rubber feet)
Weight	1.2 kg
Weight of AC adapter	0.9 kg

*1 The sum of +5VDC and +3.3VDC must not exceed 35W.
*2 AC input line voltage range: 90 - 264VAC.

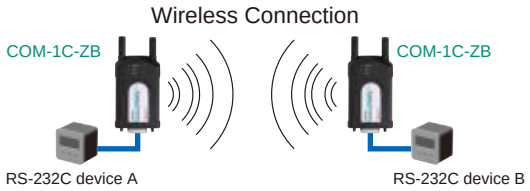
■Related Products of G series

MODEL No.	Equivalent Model	Description
GEAD(CB)BE-N	EAD(CB)BE-N	Bus Slot Expansion Adapter for Card Bus slot
GEAD(LPCI)BE	EAD(LPCI)BE	Bus Slot Expansion Adapter for Low-profile PCI
GEAD-BE-LPE	EAD-BE-LPE	Bus Slot Expansion Adapter for Low-profile PCI Express
GECH(PCI)BE-F13A	ECH(PCI)BE-F13A	PCI Bus Chassi, 13x long size slots, on board power
GECH(PCI)BE-F2B	ECH(PCI)BE-F2B	PCI Bus Chassi, 2x short size slots, AC adapter
GECH(PCI)BE-F4B	ECH(PCI)BE-F4B	PCI Bus Chassi, 2x long size slots, AC adapter
GECH(PCI)BE-F7A	ECH(PCI)BE-F7A	PCI Bus Chassi, 7x long size slots, on board power
GECH(PCI)BE-H13A	ECH(PCI)BE-H13A	PCI Bus chassi, 13x half size slots
GECH(PCI)BE-H2B	ECH(PCI)BE-H2B	PCI Bus Chassi, 2x shot size slots, AC adapter
GECH(PCI)BE-H4B	ECH(PCI)BE-H4B	PCI Bus Chassi, 4x shot size slots, AC adapter
GECH(PCI)BE-H7A	ECH(PCI)BE-H7A	PCI Bus Chassi, 7x half size slots

ZigBee-compliant [IEEE802.15.4] Wireless COM Adapter

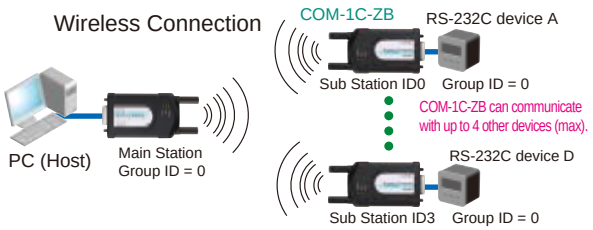
● Replace a Wired RS-232C Serial Connection - [Transparent Mode]

In this mode, data from connected devices is transferred as is, without any changes. You can replace serial cables with ZigBee-compliant wireless without changing communication software settings.



● Add an RS-232C Serial Port / 1-to-N Packet Communication- [Virtual COM Mode]

In this mode, the unit can be used as an RS-232C COM port when installed with the Virtual COM driver on the host PC. Once installed, it can communicate with up to four other devices. (1-to-N).



ZigBee-compliant Wireless COM Adapter
COM-1C-ZB

- Converts RS-232C serial communication to ZigBee-compliant short-distance wireless
- Two operating modes available: Transparent and Virtual COM modes
- Connects directly to the host PC
- AC power adapter is included
- Features onboard DIP switch and software utility for easy set-up

Windows Driver | **AC Adapter**

*Currently COM-1C-ZB is only available for use in Japan.

Model	COM-1C-ZB
Serial standard	
Interface type	RS-232C
Data Speed	1200 ~ 115,200bps *1
Connector	9-pin female D-type connector
Wireless LAN	
Interface type	IEEE802.15.1-compliant wireless
Channel	16ch (11~26)
Data Speed	250Kbps *1
Access Method	CSMA/CA
Wireless LAN category	Low-voltage Data Transmission System (2.4~2.4835GHz)
Aerial Power	1mW/MHz or less
Antenna	Built-in Chip Antenna
Power Supply	5VDC±5% (AC Adapter included)
Power Consumption (Max.)	60mA
Dimensions (mm)	78.3(L)×20.5(D)×36.5(H)
Weight	50g

*1: Represents unit's capability not actual transfer speed.

Analog I/O Calibration Services

CONTEC now offers calibration services for previously purchased analog I/O boards.
For more information or to arrange to have a board calibrated, please contact your local CONTEC distributor or sales office.

Now Available for FREE Download - ActiveX Express Edition

Development Support Tool for Measurement Programs [ActiveX component] ACX-PAC(W32)-Express Edition is now available for free download

Analog I/O
Digital I/O
Motion Control

ACX-PAC(W32)-Express Edition is a development support tool for measurement programs for use with CONTEC's measurement & control devices. When used in a development environment (i.e. Visual Basic) the ActiveX component (OCX) enables data collection and signal output by adding several lines of code.

ACX-PAC(W32)-Express Edition can be downloaded from: http://www.contec.com/acxpacee/

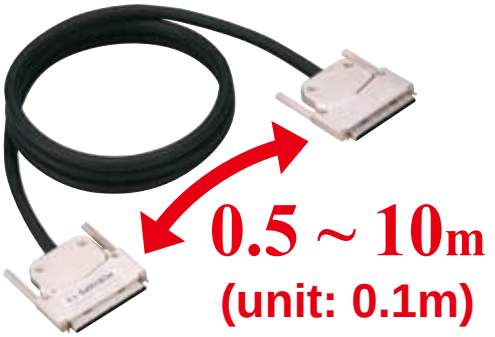
ACX-PAC(W32)-Express Edition is ideal for end-users with little programming experience. It provides basic and easy-to-use methods / events for device control from CONTEC's ACX-PAC(W32)-Commercial Edition. Commercial Edition Functions that are NOT available in the Express Edition include:

- Trigger and Interrupt functions are disabled
- DMA transfer is not supported
- Sampling using onboard or buffer memory in analog I/O is not supported
- Can only be used with devices that are set-up with the API-AIO(WDM) driver. Devices that use API-AIO(98/PC) or API-DIO(98/PC) are not supported.
- Screen display components (graphs, switches), calculation, File I/O and True Type Fonts are not included

Order made cable

for the measurement control interface boards

Flexibility



● Unit of the custom-made cable length is 0.1m

The custom-made cable length can be designated from 0.5m to 10m. (unit: 0.1m viz.10cm)
The standard products can suit for the customers' requirements in length.

High Quality

● Safety quality products

Please use the quality cables of CONTEC on CONTEC's device products.
They have passed all the Manufacturer specified delivery inspections, such as noise, static electricity, accuracy, etc.

● Cables are soft and easy to bend

The adopted cables are soft, and easy to bend, easy to use.

● RoHS -compliant

The products support RoHS standard, and are friendly to environment.

■ 100-pin 0.8mm Pitch Connector Cable

PCB100PS-xxA
(2m)
(7m)

PCB100/96PS-xxA
(2m)
(7m)

PCB100WS-xxA
(2m)
(7m)

PCA100P-xxA
(2m)
(7m)

■ 96-pin Half Pitch Connector Cable

PCB96PS-xxA
(2m)
(7m)

PCB96WS-xxA
(2m)
(7m)

PCA96PS-xxA
(2m)
(7m)

PCB96P-xxA
(2m)
(7m)

PCB96W-xxA
(2m)
(7m)

PCA96P-xxA
(2m)
(7m)

■ 68-pin 0.8mm Pitch Connector Cable

PCB68PS-xxA
(2m)
(7m)

PCA68PS-xxA
(2m)
(7m)

■ 50-pin Mini-Ribbon Connector Cable

PCB50PS-xxA
(2m)
(7m)

PCA50PS-xxA
(2m)
(7m)

■ 37-pin D-SUB Connector Cable

PCB37PS-xxA
(2m)
(7m)

PCA37PS-xxA
(2m)
(7m)

PCB37P-xxA
(2m)
(7m)

PCA37P-xxA
(2m)
(7m)

* The "xx" in the type name implies the length of the cable. For example, "PCB96PS-2.0A" means a PCB96PS-xxA cable 2m in length.

For the details of the purchase way and product information,
please contact our sale office or world-wide distributors.

Standard Cables

Shielded 96-pin Half Pitch Connector cable (Conector on both sides)

GPCA68PS-0.5P (0.5m)

GPCA68PS-1.5P (1.5m)

Shielded branch cable from 96-pin Half Pitch Connector to 2 x 37-pin D-SUB(M)

GPCB96WS-1.5P (1.5m)

GPCB96WS-3P (3m)

GPCB96WS-5P (5m)

78-pin Connector cable to connect with GCCU-78F/25M [CCU-78F/25M]

GRSS-78M (2m)

Shielded 96-pin Half Pitch Connector cable (Conector on both sides)

GPCB96PS-0.5P (0.5m)

GPCB96PS-1.5P (1.5m)

GPCB96PS-3P (3m)

GPCB96PS-5P (5m)

Shielded 50-pin Mini-Ribbon Connector cable (Conector on both sides)

GPCB50PS-0.5P (0.5m)

GPCB50PS-1.5P (1.5m)

GPCB50PS-3P (3m)

GPCB50PS-5P (5m)

GPIB Cable

GPCN-T02 (2m)

GPCN-T04 (4m)

78-pin tp 8 x 9-pin D-SUB distribution cable for GCOM-8C series

GPCE78-9PS (1m)

Ethernet-based Display Graphics Distribution System

FlexNetViewer

FlexNetViewer is an IEEE802.3u-compliant display graphics distribution system that can extend the monitor screen capability of a PC. The transmitter, GRP-VL-S-01, converts the VGA input image signals into LAN packet signals before transmitting them. The receiver, GRP-VL-R-01, converts received LAN packets into VGA image signals in order to transfer them to the monitor(s). When using both transmitter and receiver, monitors can be connected in a 1:1 or 1:N configuration independent of the application's hardware or OS.
In addition, FlexNetViewer has serial (RS-232C) and digital (4ch non-isolated LVTTL-level inputs, 4ch non-isolated LVTTL-level outputs) I/O Application utilities provide a variety of connectivity options, allowing the PC to be used as a transmitter or receiver.

Ethernet-based
Display Graphics Transmitter
GRP-VL-S-01
[RP-VL-S-01]

Ethernet-based
Display Graphics Receiver
GRP-VL-R-01
[RP-VL-R-01]

Patent pending

Left: GRP-VL-S-01 Right: GRP-VL-R-01
"FlexNetVirwer" has been applying for a registered trade mark.
Specifications subject to change without notice.

Features of FlexNetVirwer

●Monitor distance can be extended via Ethernet

When the cable length between a PC and monitor is limited, it can be easily extended by using commercially-available Ethernet cable (category 5 or higher). RGB image signals are converted into LAN packet signals before being transmitted. This prevents deterioration of the image data even when transmitted over a a long distance.

●Multi-monitor configurations

Using multiple receivers allows the image shown on the transmitter monitor screen to be shown on multiple monitors simultaneously. This requires the same number of receivers (GRP-VL-R-01) as monitors.

●Transmission independent of hardware or OS

When using both the transmitter (GRP-VL-S-01) and the receiver (GRP-VLR-01), transmitting screen images does not depend upon a specific platform (hardware or OS). The same screen images can be sent to monitors in a 1:1 or 1:N configuration without requiring complicated utility setups.

●Application utilities provide a variety of connectivity options, allowing the PC to act as transmitter or receiver

The transmitter (GRP-VL-S-01) and receiver (GRP-VL-R-01) can be connected in a variety of configurations including 1-to-1. By installing application utilities, the PC can serve as a transmitter for receivers or as a receiver for transmitters.

●Remote serial and digital I/O functions *1

By using the supplied application utilities both the transmitter (GRP-VL-S-01) and receiver (GRP-VL-R-01) can communicate with remote serial and digital I/O data devices. An RS-232C-compatible touch panel can also be used to extend the distance between display and host PC.

●Function Libraries *2

A range of function libraries including those for transmission and displaying of screen images and remote serial and digital I/O are available.

●Optional LCD monitor mounting adapter

An optional adapter is available to mount the receiver on the back of an LCD monitor. The adapter is VESA-compliant (75mm x 75mm or 100mm x 100mm).

*1: Requires Host Management Utility
*2: Image Viewer, Image Transmission Utility, Host Management Utility and Function Libraries can be downloaded from CONTEC's web site. Supported OS: Windows Vista, XP and 2000

■ Specifications

Model	GRP-VL-S-01 (Transmitter)	GRP-VL-R-01 (Receiver)
VGA		
Input port	RGB (15-pin HD-SUB) ×1	-
Output port	RGB (15-pin HD-SUB) ×1	
Resolution	VGA(640×480), SVGA(800×600), XGA(1024×768)	
Horizontal frequency	VGA(31.4kHz), SVGA(37.8kHz), GA(1024×768(48.3kHz)	
Vertical frequency	60Hz	
Frame rate (Max.)	10 Frames (VGA), 7 Frames (SVGA), 6 Frames (XGA) *1	
Display color	32768 colors	
Digital I/O		
I/O connector	10-pin Right-angle Pin Header (2.54mm Pitch) ×1 *2	
Input channels	4	
Input type	LVTTL-level input (positive logic) *3	
Output channels	4	
Output type	LVTTL-level input (positive logic)	
Response time (Max.)	200nsec *4	
Wiring distance	1.5m (Max.) *5	
Serial I/O		
I/O connector	9-pin D-SUB ×1	
Channels	1ch	
Interface type	RS-232C (TXD, RXD, RTS, CTS, DTR, DSR)	
System method	Asynchronous	
Baud rate	110bps ~ 38400bps *8	
Data length	7, 8 bits; 1, 2 stop bits *8	
Parity check	even, odd, non-parity	
Wiring distance	15m (Max.) *7	

Model	GRP-VL-S-01 (Transmitter)	GRP-VL-R-01 (Receiver)
LAN		
I/O connector	RJ-45 connector ×1	
Ethernet standard	IEEE802.3u (100BASE-TX) *8	
Data Transmission Rate	100Mbps *8	
Supported Protocols	UDP, TCP, DHCP, IP, ARP	
Number of connected devices	64 (using Remote Serial & Digital I/O function) *9	
Others		
Dimensions (mm)	133(W) × 86.6(D) × 24(H)	
Temp. / Humidity	0~50°C, 10~90%RH (no condensation)	
Power supply	AC Adapter: 5VDC 2A(Max.) (included attachment)	
Current Consumption (Max.)	5VDC 1100mA	5VDC 820mA
Weight	340g	320g

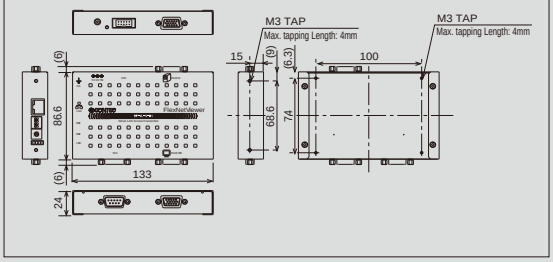
*1: Frame rate may decrease with frequently updated images (e.g. animation).
*2: Use the included crimp connector.
*3: 5V-tolerant input enabled.
*4: TTL response speed. The actual throughput depends on host PC and LAN equipment.
*5: Actual extendable signal distance may be shorter, depending on the cable used and wiring conditions.
*6: Can be set via software.
*7: Actual extendable signal distance may be shorter, depending on the cable used and wiring conditions.
*8: 10BASE-T (10Mbps), IEEE802.3x flow control (10Mbps) are not supported.
*9: The number of units that can be connected varies depending on the application as shown on the next page.

■ Optional Accessories

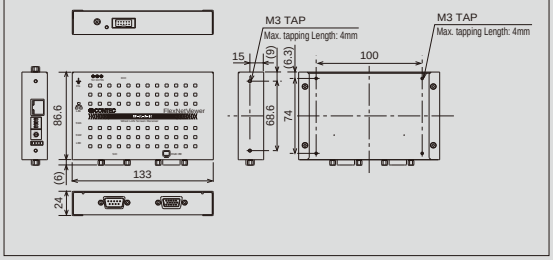
Name	Description
CF Card (Fixed Disk Mode)	
GBRK-VL01-75	VESA-compliant adapter (75mm x 75mm)
GBRK-VL01-100	VESA-compliant adapter (100mm x 100mm)

Dimensions

GRP-VL-S-01



GRP-VL-R-01



Unit: (mm)

Connectable Devices

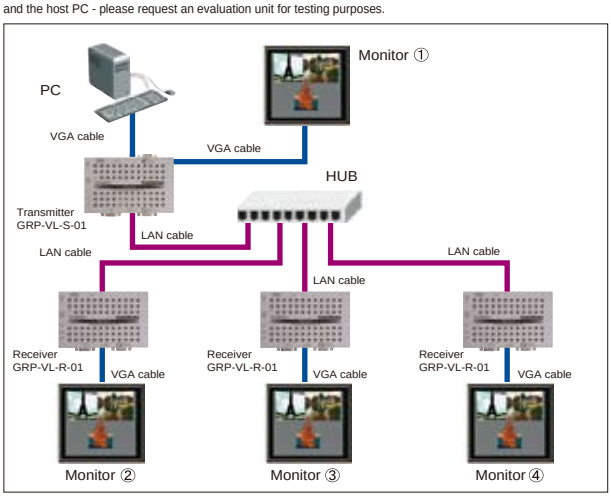
Transmitter	Receiver	Screen Image	Remote Serial I/O	Remote Digital I/O	Number of connected devices
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 512 Receivers*1
PC ×1	Use	Same	Use	Use	64 Receivers
PC ×1	Use	Same	Use	Use	64 Receivers
PC ×1	Use	Same	Use	Use	No limitation
PC ×1	Use	Same	Use	Use	No limitation
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
Use	PC ×1	Different	Use	Use	32 Transmitters *2
Use	PC ×1	Different	Use	-	32 Transmitters *2
Use	PC ×1	Different	-	Use	65535 Transmitters *2*3
Use	PC ×1	Different	-	-	65535 Transmitters *2*3

*1: When set up with flow control via host management utility
*2: Maximum number of devices image viewer will support
*3: Number dependent upon TCP/IP restrictions in PC and LAN environments

System Configuration

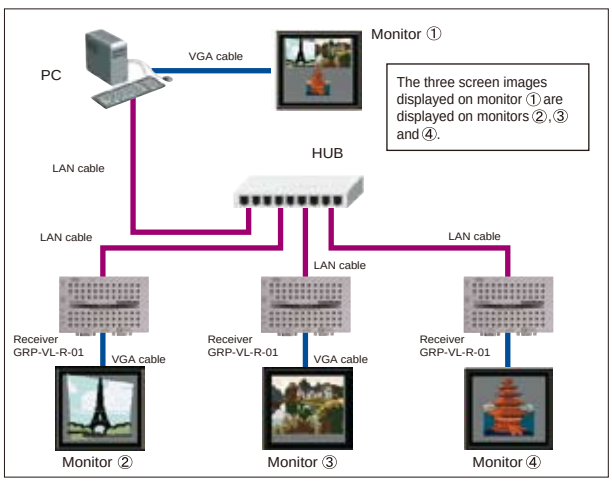
(1) Display a screen image on multiple monitors (Transmitter ⇔ Receiver)

▼NOTE:
There may be a decrease in the image quality due to compatibility issues between these units and the host PC - please request an evaluation unit for testing purposes.



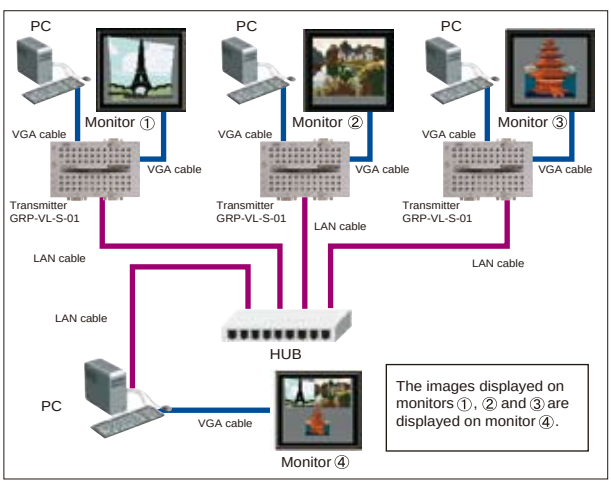
(2) Display different window screen on specified monitors PC (through use of Utilities) ⇔Receiver

Requires use of Image Traqnsmission Utility.



(3) Monitoring multiple PCs remotely Transmitter ⇔ PC (through use of Utilities)

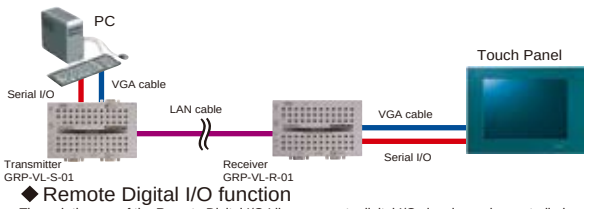
Requires use of Image Viewer Application.



(4) Other functions

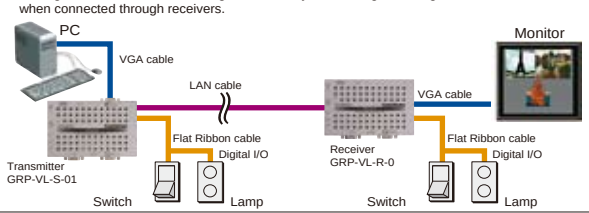
◆Remote Serial I/O function

This function enables remote control of RS-232C device when connected to the receiver
Touch panel monitors can be remotely located when connecting through the SIO port of the receiver.
Multiple monitors can be connected, controlling the same or individual windows.
Note: Some RS-232C devices cannot communicate with the receiver due to compatibility issues
- please request an evaluation unit for testing purposes.



◆Remote Digital I/O function

Through the use of the Remote Digital I/O Library, remote digital I/O signals can be controlled when connected through receivers.



Software

Development of Measurement/Control Systems Made Easy by Active X Components.

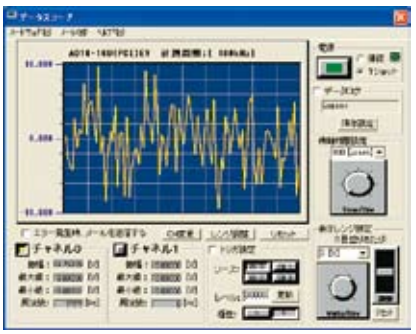
Active X Component Package for measurement system development

(Development software requires Japanese environment.) NEW

Windows Vista / XP / Server 2003 / 2000 / NT / Me / 98/95 / CD-ROM

Compliant with more than 200 types of our measurement control interface boards (cards), this software component package specialized for measurement contains a wide variety of ActiveX components including those for display (graphs, sliders, etc.), analysis and operation (FFT, filters, etc.) and file operation (data saving and reading). It achieves efficient and short-term development of application programs by allowing you to paste software components and describe the association in script. Furthermore, as the product contains actual samples (application programs) such as data logger and wave analysis tools, you can start PC measurement right away without the need for program development. Actual samples come with source codes (Visual Basic) to enable customization on the users side.

ACX-PAC Series is the optimum software for those who wish to develop measurement/control systems on Visual Basic and Excel. Windows Vista/XP/ Server2003/2000/NT/Me/98/-based application programs can be created easily without the need for developing complicated programs.



Data scope sample

Display sample

New Features
ACX-PAC(W32) Ver.5.0 supports:

- PCI / PCI Express Motion Controllers
- Bus master transfer of Digital I/O and Analog I/O boards
- New Timing chart display component
- Transparent background for display components
- Latest CONTEC interface boards and USB terminals

Product Requirements:

PC
- IBM PC/AT-compatible, DOS/V

OS (Japanese Font is required for development system)
- Microsoft Windows Vista
- Microsoft Windows XP
- Microsoft Windows Server 2003
- Microsoft Windows 2000 Professional
- Microsoft Windows NT Ver.4.0 (SP3 or above) + IE4.01 or above
- Microsoft Windows Me
- Microsoft Windows 98
- Microsoft Windows 95 (SP1 or above) + IE4.01 or above

Please check our homepage for further details.

Others
- Pentium100MHz or above is recommended for CPU.
- Environment in which programming languages (containers) can operate normally

Compliant Development Environment
- Microsoft Visual Basic 2005
- Microsoft Visual Basic .NET 2003, 2002
- Microsoft Visual Basic Ver.6.0, 5.0
- Microsoft Visual C++ 2005
- Microsoft Visual C++ .NET 2003, 2002
- Microsoft Visual C# 2005
- Microsoft Visual C# .NET 2003, 2002
- Microsoft Visual C++ Ver.6.0, 5.0
- Microsoft Excel 2003(VBA 6.4), 2002(VBA 6.3),2000(VBA 6.0),97(VBA 5.0)
- Borland Delphi Ver.7 Ver.5, Ver.4
- National Instruments LabVIEW 8.20, 8, 7.1, 7.0, 6.1, 6i

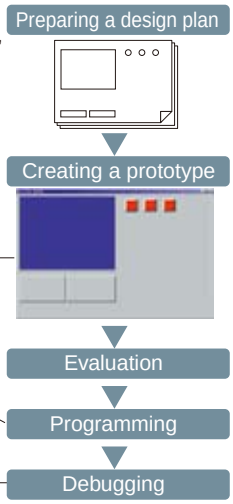
Note: As for *1 to *4, please check Product Requirements on Page-05.

Creating Displays for Measurement/Control Systems:

You can create displays such as the one shown above simply by pasting components onto the form. The following chart shows the advantages of using ActiveX Components over the conventional programming method.

Development through programming

The common development process begins with a screen page designing by a designer, followed by prototype making by a programmer and the evaluation of user interface. In this method, screen page designing in the first stage is required to be at a level of perfection as changing design becomes more and more difficult as the development process moves forward.



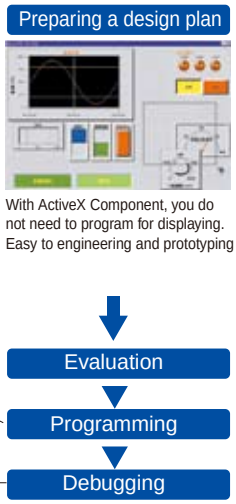
Going back to the design plan for modification takes time.

Modification will be even more difficult once the programming is started.

GUI must also be debugged.

Development using ActiveX Component Package

By using ActiveX Component Package, a designer can actually paste the control to create a screen page. It is also easy to adjust the operability. Development time can be reduced substantially as modifying a screen page does not require any programming or outsourcing.



With ActiveX Component, you do not need to program for displaying. Easy to engineering and prototyping

Interface can be modified easily even after programming is started.

GUI need not be debugged

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CONTEC
www.contec.com

JAPAN(Headquarters)
CONTEC CO.,LTD.
3-9-31, Himesato,
Nishiyodogawa-ku,
Osaka 555-0025, Japan
Tel : 81-6-6477-5219
Fax : 81-6-6477-1692
http://www.contec.co.jp/

U.S.A.
CONTEC MICROELECTRONICS U.S.A. INC.
1294 Lawrence Station Road,
Sunnyvale, CA.94089, U.S.A.
Tel : 1-408-400-8700
Fax : 1-408-400-9115
http://www.contecusa.com/

CHINA
BEIJING CONTEC MICROELECTRONICS CORPORATION.
B-809, Hua Tong Building,
No. B19, Che Gong Zhuang
West Road, Hai Dian District,
Beijing 100044, China
Tel : 86-10-8801-8228
Fax : 86-10-8801-8209

SHANGHAI CONTEC MICROELECTRONICS CORPORATION.
No. 481, Gui Ping Road,
Cao He Jing,Hi-Tech Park,
Shanghai 200233, China
Tel : 86-21-6485-1907
Fax : 86-21-6485-0330

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